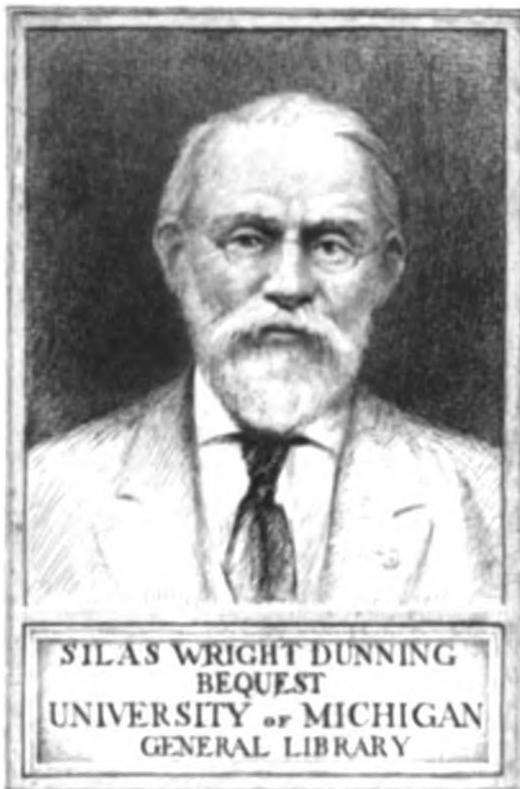

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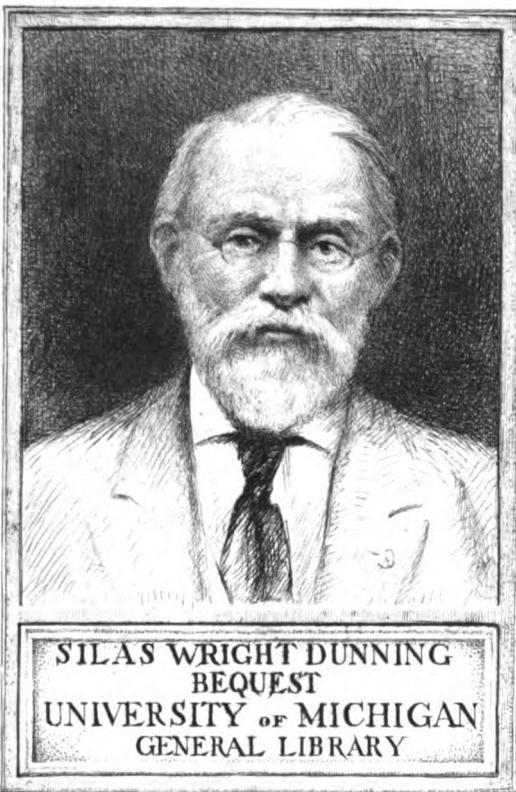
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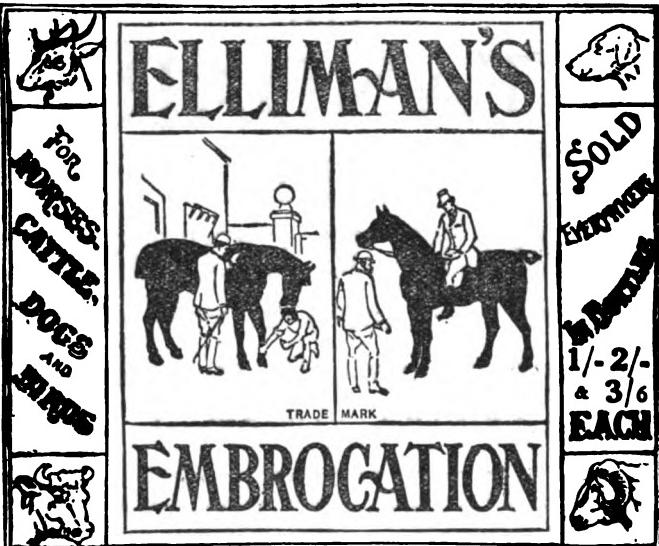
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United Service Institution of India.

JANUARY 1916.

SECRETARY'S NOTES.

I.—New Members.

The following members joined the Institution between the 2nd September and the 1st December 1915 inclusive:—

LIFE MEMBERS.

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III.—Military History Papers.

(1) In order to assist officers in the study of military history, the Institution has sets of questions on the following campaigns.

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- (b) Three papers on Callwell's Small Wars.
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- (g) One paper on the Indian Mutiny.
- (h) One paper on the Shenandoah Valley Campaign, 1861–62.
- (i) One paper on the Bohemian Campaign, 1866, to the Battle of Koniggratz, inclusive.
- (j) One paper on the Jena Campaign, 1806.
- (k) One paper on the Franco-German War, 1870.

The charge for these papers is Rs. 5 each, which includes criticism by qualified officers.

(2) Pamphlets dealing with the Shenandoah Valley Campaign from April 1861 to June 1862, the Bohemian Campaign, 1866 to the battle of Koniggratz inclusive, and the Battle of Liaoyang, can be obtained from the Secretary, Price Re. 1 each, or Re. 1-2-0 per V. P. P.

IV.—Maps.

The Institution has for sale a variety of large scale maps, (2 and 4 inches to one mile), price As. 8 each.

They are especially useful for instruction in map reading, tactical schemes and in preparation for examination, and can be had either of English or Indian country.

V.—Premia for Articles in the Journal.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

VI.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 483, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors are requested to have their articles either typed or printed.

VII.—Library Catalogue.

The library catalogue revised up to 1st November 1912 is available. Price of catalogue Re. 1 or Re. 1-4-0 per V. P. P. A new catalogue is being compiled which is now in press. A list of books received each quarter is published with the Journal.

VIII.—Gold Medal Prize Essay, 1915-16.

The Council have chosen as the subject for the Gold Medal Essay for 1915-16 the following:

"The improvement in strength and efficiency of the Volunteer Force in India."

The following are the conditions of the competition:—

(1) The competition is open to all gazetted officers of the Civil administration, the Navy, Army and Volunteers, who are members of the U. S. I. of India.

(2) Essays must be printed or type-written and submitted in triplicate.

(3) When a reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto, written on the outside, and the name of the competitor inside.

(5) Essays will not be accepted unless received by Secretary on or before the 30th June 1916.

(6) Essays will be submitted for adjudication to referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in August or September 1916.

(8) All essays submitted are to become the property of the United Service Institution of India, *absolutely*, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.

(9) Essays should not exceed about 15 pages of the Journal, when printed, exclusive of any appendices, tables or maps.

IX.—Regimental Army Lists.

The Institution is prepared to supply members and units with manuscript type-written or printed pages from

old Army Lists since 1800. Endeavours will also be made to procure extracts from the "Registers" prior to that date. The following will be the rates charged:—

Manuscript copy of each page	...	Re. 1 0 0
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It is regretted that our former arrangement with the press has come to an end, and we are no longer able to get the printing done as cheaply as before.

If facsimile of *type* is required the price of printed pages will range from Rs. 5-8 to Rs. 3-8 per page, according to the amount of matter on each page, the higher rate being charged for pages similar to those of the Indian Army in the current Army List.

X.—War Maps.

War Maps are on view in the Reading Room of the Institution, with the positions of the troops, so far as is known, marked with flags, in each theatre of war.

XI.—Annual Subscriptions.

The Committee wish to invite the attention of members to the large amount of unnecessary correspondence and expense annually caused to the Institution by the difficulty in getting in the annual subscriptions. If members wish to resign their membership they have only to notify the fact in writing to the Secretary. If this is not done, it is presumed that they wish to remain members and the Journal is regularly posted to their last known address.

Much inconvenience and unnecessary correspondence is also caused by the failure of members to notify their changes of address or to make any arrangements for the Journal to be sent after them, when they change their address.

Secretary's Notes.

The remedy for both these matters lies with members themselves, and it is for their consideration whether they agree to continue supplying the Journal to those who have not paid their subscriptions, and to have the time of their staff largely taken up in issuing reminders and trying to trace addresses.

XII.—Books Presented to the Institution.

The acknowledgments of the Council for the following presentations are hereby recorded:—

TITLE.	AUTHOR.
English-Russian Dictionary. ...	... Alexandrow.
Russian-English Dictionary. ...	... Alexandrow.
Russian Conversation, Grammar. ...	Pietro Motto.
Key to Russian Conversation, Grammar (2 copies). ...	... Pietro Motto.
Russian Composition. ...	... Schnurmann.
English-Russian Grammar. Ch. P. H. Reiff.
A Graduated Russian Reader. Henry Riota.
Works of Gogol (in Russian). ...	—
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Presented by Captain A. J. H. Grey, I. A.

DIARY OF THE WAR.

UP TO THE 5th DECEMBER 1915.

For further details regarding events from 28th June 1914 to 15th September 1915, see the Numbers of the 1915 Journal of the U. S. I. of India.

JUNE 28TH, 1914.—The Archduke Franz Ferdinand assassinated.

JULY 28TH.—Austria declared war on Servia.

AUGUST 1ST.—Germany declared war on Russia.

AUGUST 2ND.—Germany ultimatum to Belgium.

AUGUST 3RD.—War declared between France and Germany.

AUGUST 4TH.—Neutrality of Belgium violated. Great Britain declared war on Germany.

AUGUST 5TH.—Germany declared war on Belgium.

AUGUST 6TH.—Austria declared war on Russia.

AUGUST 8TH.—French advance into Alsace. Servia declared war on Germany.

AUGUST 10TH.—France declared war on Austria. Austrian invasion of S. Poland.

AUGUST 11TH.—French retired from Alsace. Russian invasion of E. Galicia.

AUGUST 12TH.—Great Britain declared war on Austria. Austrians invaded Servia.

AUGUST 15TH.—French invade German Lorraine. Fall of Liege.

AUGUST 16TH.—British Expeditionary Force completed its landing in France. Russian first invasion of E. Prussia.

AUGUST 19TH.—Austrians defeated by Serbs in Servia. 2nd French invasion of Alsace.

AUGUST 20TH.—Germans occupied Brussels.

Diary of the War.

AUGUST 21ST.—Battle of Charleroi commences.

AUGUST 22ND.—French driven from Charleroi.

AUGUST 23RD.—Japan declared war on Germany. French driven out of Alsace and Lorraine. Fall of Namur.

AUGUST 24TH.—Commencement of the retreat from Mons. Austrians driven out of Servia.

AUGUST 25TH.—Russian defeat at Tannenburg.

AUGUST 28TH.—Cruiser action off Heligoland.

SEPTEMBER 3RD.—Russians occupied Leenburg.

SEPTEMBER 4TH.—Russians commenced the offensive in S. Poland.

SEPTEMBER 5TH.—End of retreat from Mons.

SEPTEMBER 6TH.—Servian invasion of Austria.

SEPTEMBER 7TH.—Fall of Maubeuge.

SEPTEMBER 8TH.—German retirement to R. Aisne commenced.

SEPTEMBER 11TH.—Australians occupied Bismarck Archipelago.

SEPTEMBER 12TH.—Beginning of battle of the R. Aisne. Austrians driven back to the R. San. 2nd Austrian invasion of Servia. Servian invasion of Austria abandoned.

SEPTEMBER 17TH.—E. Prussia again clear of the Russians, German advance towards the R. Niemen.

SEPTEMBER 20TH.—Extension of opposing lines from the R. Aisne to the Channel commences.

SEPTEMBER 23RD.—Commencement of siege of Przemysl.

SEPTEMBER 25TH.—The Australian forces announce the occupation of Kaiser Wilhelm's Land.

SEPTEMBER 26TH.—Indian Expeditionary Force lands in France. Repulse of 1st German attack on R. Niemen, and retreat of Germans to E. Prussia.

SEPTEMBER 28TH.—Battle on R. Aisne develops into a stalemate. Siege of Antwerp commences.

OCTOBER 3RD.—1st German advance on Warsaw.

OCTOBER 9TH.—Fall of Antwerp. Commencement of rebellion in S. Africa.

- OCTOBER 11TH.—2nd Russian invasion of E. Prussia.
- OCTOBER 12TH.—Remains of the Belgian Field Army reached R. Yser.
- OCTOBER 13TH.—Germans occupy Lille.
- OCTOBER 14TH.—Allies occupy Ypres.
- OCTOBER 16TH.—Commencement of the battle of Ypres.
- OCTOBER 23RD.—Russians completely repulse 1st German advance on Warsaw.
- OCTOBER 28TH.—Russians advanced in Poland. Rebellion in South Africa.
- OCTOBER 29TH.—Violation of Egyptian frontier by Turkish Arabs. Turks bombarded Odessa.
- OCTOBER 31ST.—Bombardment of Tsingtau begins.
- NOVEMBER 1ST.—H. M. S. "Monmouth" and H. M. S. "Good Hope" sunk in an action on the Chilian coast. Germans driven out of Poland.
- NOVEMBER 3RD.—Russians invade Turkish Armenia, 1st Bombardment of Dardanelles.
- NOVEMBER 4TH.—British reverse in German East Africa.
- NOVEMBER 5TH.—Great Britain declares war on Turkey. Cyprus annexed.
- NOVEMBER 6TH.—British land in Mesopotamia.
- NOVEMBER 7TH.—Fall of Tsingtau.
- NOVEMBER 9TH.—H. M. A. S. "Sydney" sank the German cruiser "Einden."
- NOVEMBER 11TH.—End of the battle of Ypres.
- NOVEMBER 14TH.—Death of Lord Roberts.
- NOVEMBER 17TH.—Defeat of Turks by British Indian Force at Sain in Mesopotamia.
- NOVEMBER 27TH.—2nd German attack on Warsaw.
- NOVEMBER 22ND.—British occupied Basra.
- NOVEMBER 25TH.—End of rebellion in S. Africa.
- NOVEMBER 28TH.—Russian advance on Cracow.
- NOVEMBER 29TH.—King George crossed to France.
- NOVEMBER 30TH.—Turkish invasion of Caucasia commences. Austrians capture Belgrade.

Diary of the War.

DECEMBER 2ND.—Servians took the offensive along their whole front.

DECEMBER 3RD.—Second French invasion of Alsace.

DECEMBER 5TH.—King George returned to London.
Battle commenced S. E. of Cracow.

DECEMBER 8TH.—A British squadron off the Falkland Islands sunk the German cruisers "Scharnhorst," "Gneisenau," "Leipzig" and "Nurnberg".

DECEMBER 13TH.—British submarine B-II sunk the Turkish ironclad "Messudieh".

DECEMBER 14TH.—Austrians again driven from Servia.

DECEMBER 17TH.—Egypt is placed under the protection of Great Britain.

DECEMBER 18TH.—Prince Hussein Kamel Pasha is appointed Sultan of Egypt.

DECEMBER 23RD.—2nd German attack on Warsaw stopped.

DECEMBER 25TH.—British air raid on Cuxhaven. Turkish invasion of Caucasia checked.

DECEMBER 26TH.—Austrian defeat in Galicia.

JANUARY 1ST.—H. M. S. "Formidable" torpedoed in the English Channel.

JANUARY 3RD.—Russians completely defeat Turkish forces concentrated at Ardahan in the Caucasus.

JANUARY 4TH.—Russians defeat enemy in North Poland.

JANUARY 6TH.—Russians defeat the Turks at Sarikamysk in Caucasia. French advance towards Mulhausen announced.

JANUARY 11TH.—French driven back at Soissons. Turkish advance on Egypt begun.

JANUARY 13TH.—Tabriz taken by the Turks. Turks near Erzerum check Russian advance.

JANUARY 14TH.—Swakopmund, occupied by Union Forces.

JANUARY 16TH.—Turks driven out of Caucasia.

JANUARY 19TH.—German airships attack Yarmouth, King's Lynn, Snettisham, and other Norfolk towns and villages.

JANUARY 24TH.—The "Blucher" sunk, and two German battle cruisers seriously damaged in the North Sea.

JANUARY 25TH.—The British repulse an attack on Givenchy, near La Bassee.

JANUARY 26TH.—Attacks on Suez Canal commenced.

JANUARY 30TH.—2nd German attack towards Warsaw from the West.

JANUARY 31ST.—Heavy fighting in the Argonne, near Fontaine Madame. Russians advancing on Tabriz.

FEBRUARY 1ST.—Russians force the Dukla Pass in the Carpathians and capture the G. O. C. and staff of the 30th Turkish division near Olty in Transcaucasia.

FEBRUARY 2ND.—Turkish attack on Suez Canal repulsed.

FEBRUARY 3RD.—Russian advance on right flank of lower Vistula and in E. Prussia. Turkish attack on El Kantara on the Suez Canal repulsed.

FEBRUARY 4TH.—Final Turkish attack on Suez Canal repulsed. Repulse of 2nd German attack on Warsaw.

FEBRUARY 5TH.—Germans proclaim the waters round Great Britain and Ireland to be a "Military Area".

FEBRUARY 6TH.—Russians take the offensive on left bank of lower Vistula.

FEBRUARY 7TH.—Austro-German offensive commenced in E. Prussia and Bukovina.

FEBRUARY 10TH.—Germans advance in E. Prussia.

FEBRUARY 11TH.—3rd German attempt on Warsaw from the North.

FEBRUARY 12TH.—Turkish detachment annihilated at Tor in the Sinai Peninsula.

FEBRUARY 19TH.—3rd German advance on Warsaw checked and Russians assume the offensive. British and French fleets bombard the entrance to the Dardanelles.

FEBRUARY 20TH.—Austrians occupy Stanislavof.

FEBRUARY 22ND.—Russians recapture Stanislavof.

FEBRUARY 24TH.—Russian attacks on Praznitz.

FEBRUARY 26TH.—Russians recapture Praznitz.

FEBRUARY 28TH.—Blockade of German E. Africa commences.

Diary of the War.

MARCH 1ST.—Absolute blockade of Germany declared by England.

MARCH 2ND.—Russians defeat the Austrians on the R. Lomnitz taking 6,000 prisoners, Russians capture the Turkish port of Khopa.

MARCH 3RD.—Actions near Ahwaz and Nakhailah in Mesopotamia.

MARCH 10TH.—British capture Neuve Chapelle.

MARCH 14TH.—British recapture St. Eloi.

MARCH 18TH.—Three vessels of the Allied Fleets in the Dardanelles sunk by mines.

MARCH 19TH.—Russian offensive in the Carpathians commences.

MARCH 22ND.—Fall of Przemysl.

MARCH 27TH.—Capture by the French of summit of Hartmannswillerkopf, in the Vosges.

MARCH 28TH.—Russian success at Baligrod in the Carpathians.

APRIL 1ST.—Total British naval losses to date in killed, wounded, missing, prisoners and interned 8141.

APRIL 6TH.—Austro-German counter offensive in the Carpathians.

APRIL 7TH.—German line between the Meuse and the Moselle pushed back by the French.

APRIL 8TH.—The German armed merchantman Prince Eitel Friedrich is interned in the U. S. A. The French gain ground in the St. Mihiel region. Allied attack on Enos is reported.

APRIL 14TH.—British victories at Shaiba near Basra.

APRIL 15TH.—Total war casualties up to April 11th 139,347. (The total casualties were given as 57,000 on October 31st and 104,000 on February 4th.)

APRIL 17TH.—Loss of British submarine E. 15 in the Dardanelles. Capture of hill 60, S. E. of Ypres by the British.

APRIL 19TH.—The French make appreciable progress in Alsace, advancing along both banks of the Fecht. End of fighting in the Carpathians.

APRIL 20TH.—Keetmanshoop, a central position in German South West Africa, occupied by Union forces.

APRIL 21ST.—The French line is slightly advanced in the St. Mihiel area.

APRIL 22ND.—Commencement of 2nd battle of Ypres. Germans use asphyxiating gas. French progress south of St. Mihiel.

APRIL 25TH.—The Allied forces effect a landing on both shores of the Dardanelles.

APRIL 26TH.—The summit of Hartmannsweilerkopf is recaptured by the Germans, and retaken from them by the French.

APRIL 27TH.—Allied forces make good their footing on the Gallipoli Peninsula and the Asiatic side of the Dardanelles. The French armoured cruiser "Leon Gambetta" torpedoed in the Otranto Straits.

APRIL 28TH.—Commencement of German advance into Russian Baltic Provinces.

APRIL 29TH.—Battle on the Plain of Troy.

MAY 1ST.—H. M. S. "Recruit," a destroyer, sunk by a German submarine and 2 German torpedo boats sunk by British destroyers off the Belgia coast. Great Austro-German offensive movement commenced in W. Galicia. Turkish attacks repulsed in the Gallipoli Peninsula.

MAY 2ND.—In W. Galicia the Russians driven across the R. Dunajec. Turkish attacks repulsed and Allies advance in the Gallipoli Peninsula.

MAY 3RD.—Russians defeat the Turks in W. Persia.

MAY 6TH.—Austrian offensive on R. Dniester.

MAY 7TH.—Cunard liner "Lusitania" sunk by a German submarine off the Irish coast, H. M. S. "Maori," destroyer, sunk by a mine off the Belgian coast.

MAY 8TH.—Allies advanced in the Gallipoli Peninsula.

MAY 9TH.—Austro-Germans in W. Galicia crossed the R. Wisloka.

MAY 10TH.—Russian advance in Bukovina.

MAY 12TH.—H. M. S. Goliath and submarine A. E. 2 sunk in the Dardanelles. S. African forces captured Windhoek, the capital of German S. W. Africa.

MAY 13TH.—French captured Notre Dame de Lorette, north of Arras.

MAY 14TH.—Austro-Germans reached R. San.

MAY 15TH.—German offensive in Russian Baltic Province—stops. Russian counter stroke at Opatov.

MAY 16TH.—British success at Festubert. Russian success at Shavli in the Baltic Provinces.

MAY 17TH.—Further British advance in the Gallipoli Peninsula. End of 2nd battle of Ypres.

MAY 18TH.—A National Government of all parties decided on in England.

MAY 19TH.—Considerable advance by the Allies in the Gallipoli Peninsula.

MAY 21ST.—Russian counter offensive to facilitate evacuation of Przemysl.

MAY 23RD.—Italy declared war on Austria.

MAY 24TH.—Italians invaded the Trieste Province.

MAY 25TH.—Italians invaded the Trentino Province. Coalition cabinet formed in Great Britain.

MAY 26TH.—H. M. S. "Triumph" sunk by a submarine in the Dardanelles.

MAY 27TH.—H. M. S. "Majestic" sunk in the Dardanelles.

MAY 28TH.—Auxiliary ship "Princess Irene" blown up at Sheerness.

MAY 30TH.—British captured Spinkhaven on L. Nyassa.

MAY 31ST.—British advanced up R. Tigris and defeated the Turks north of Qurnah.

JUNE 1ST.—French capture Souchez and Carency.

JUNE 2ND.—British stormed Chateau Hooge, north of Ypres. Russians evacuated Przemysl.

JUNE 3RD.—Italians crossed R. Isouzo in Trieste Province. Germans occupied Przemysl.

JUNE 4TH.—British in Mesopotamia take Amara on R. Tigris.

JUNE 5TH.—Germans attacked Moscizka, east of Przemysl.

JUNE 6TH.—Naval action in the Baltic, Russian submarines damage 3 German men of war.

JUNE 7TH.—Zeppelin returning from the raid in England destroyed by a British aeroplane between Ghent and Brussels. Another Zeppelin burnt in its shed north of Brussels. Russians retired from Bukovina.

JUNE 8TH.—Italians captured Monfalcone at the mouth of R. Isonzo.

JUNE 9TH.—2 British torpedo boats sunk by a submarine in the North Sea.

JUNE 11TH.—A British and French force captured Garua in the Cameroons.

JUNE 13TH.—Belgians forced the crossing of the R. Yser at Dixmude. Germans advance between Sienawa and Moscizka in Galicia.

JUNE 15TH.—Lord Hardinge's term as Viceroy of India extended to March 1916.

JUNE 20TH.—Zolkiev and Rava Ruska captured by the Austro-German forces.

JUNE 21ST.—Metzeral captured by the French.

JUNE 22ND.—Recapture of Lemberg by the Austro-German Armies. Sondernach, south of Metzeral, captured by the French.

JUNE 26TH.—General Sukhomlinoff, Russian Minister for War, resigns. General Polivanoff succeeds him.

JUNE 27TH.—Germans capture Halicz.

JUNE 28TH.—British attack on Achi Baba in Gallipoli; the Boomerang Redoubt and three lines of Turkish trenches captured. Germans bombard Windau on the Baltic coast.

JUNE 29TH.—Turkish attempt to retake trenches in Gallipoli beaten off. Allied forces in the Central Cameroons occupy Ngamdere.

JUNE 30TH.—Germans cross the Gnila Lipa. H. M. S. Lightning damaged by a mine or torpedo.

JULY 1ST.—The Armenian, a Leyland liner, chased, shelled, and finally sunk by a German submarine ; 29 of the crew, mostly Americans, drowned. Germans capture Zamosc and Krasnik.

JULY 2ND.—Naval action between Russian and German warships in the Baltic off the coast of Gothland ; German battleship Pommern torpedoed and sunk by British submarine ; German mine-laying cruiser Albatross chased by four Russian cruisers and ran ashore. Italian attack on the Carso plateau begun. Turkish attacks in Gallipoli repulsed.

JULY 3RD.—German attacks on the Calonne trench on the heights of the Meuse repulsed. German sea-plane and aeroplane off Harwich chased away by British machines. South African offer to organize and equip an oversea volunteer contingent.

JULY 4TH.—British force from Aden, which had fallen back on Lahej before a Turkish force from the Yemen, attacked and retires to Aden. The German cruiser Konigsberg, which had sheltered in October up the Rufiji River in German East Africa, destroyed by the monitors Severn and Mersey. Determined attack by the Turks in Gallipoli repulsed.

JULY 5TH.—Archduke Joseph of Austria defeated by the Russians north-east of Krasnik on the line Urzedow-Wilkolaz-Bychawa ; Germans repulsed between the Vieprz and the Bug. Fighting round Souchez ; Arras bombarded.

JULY 6TH.—German attack on Russian lines at the Ravka. British capture 200 yards of German trenches south-west of Pilken to the north of Ypres. Germans attack at the St. Mihiel wedge and pierce the French line in one place. Offer of the South African Union to raise an Imperial contingent accepted.

JULY 7TH.—French attacks at Souchez carry a line of German trenches. Italian attacks on the bridge-head at Gorizia.

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JULY 10TH.—Text of the German reply to the United States Note *re* the Lusitania published; German action defended and proposal made that Americans should travel in their own or neutral ships, specially marked and with sailings notified in advance.

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JULY 12TH.—Further British advance in Gallipoli; two lines of trenches carried; French advance to the edge of the Keveres Dere. French regain portion of lost trenches at Souchez.

JULY 13TH.—French aerial squadron bombard and destroy German stores at Vigneulles in the St. Mihiel wedge, and throw bombs at Librecourt between Douai and Lille. Crown Prince captures portion of the French line at Vienne le Chateau in the Argonne.

JULY 14TH.—German offensive on the Narev front; Prasnysz captured. New German offensive develops in the direction of Riga. French capture a line of trenches south of Souchez. Fighting at Nasiriyeh where the Turks were driven from their position on the Euphrates by a British expedition from Qurnah. National Registration Bill passed the third reading in the House of Lords.

JULY 15TH.—Crown Prince's army repulsed in the Argonne, German unsuccessful attack in Lorraine near Leintrey; Germans endeavour to recapture trenches at Souchez.

JULY 16TH.—French aerial squadrons drops bombs on railway station at Chauny on the Aisne.

JULY 17TH.—Von Hindenburg's offensive forcing the Russians back towards the line of fortresses of the Narev. Von Mackensen's offensive towards the Lublin-Cholm railway breaks the Russian line at Krashostav. Italian successes on the Cadore frontier.

JULY 18TH.—Russians fall back from Bzura-Ravka front to the Blonie line; the fortress of Novo-Georgievsk in action; Germans cross the Bug near Sokal. German attack west and south-west of Souchez repulsed. Italian cruiser Giuseppe Garibaldi sunk by Austrian submarines in the Adriatic. Italian success on the Isonzo; 2,000 prisoners and guns captured.

JULY 19TH.—German attack south-east of Les Eparges repulsed. French aeroplanes drop shells on the station of Challerange, to the south of Vouziers; French dirigible drops bombs on railway station and ammunition depot at Vigneulles, south-east of Les Eparges.

JULY 20TH.—Heavy fighting on the Narev before the fortresses of Rozhan, Obryte Pultusk, and Novo Georgievsk. French advance up the valley of the Fehrt towards Muuster, French aeroplanes bombard the station at Colmar, and also at Couflans-en-Jarny on the Verdun-Metz railway, Italian progress on the Isonzo towards Gorizia.

JULY 21ST.—Warsaw and Ivangorod threatened, German offensive in Courland progressing, Austro-German army driven across the Bug in the Sokal district. British success at Hooge, Turkish forces in the Aden district driven back to Lahej.

JULY 22ND.—German advance towards Riga progressing, French progress near Bagatelle: French offensive towards Munster continues, Italian advance on the Isonzo front from

Tolmino to Monfalcone; Italian airmen raid the Trieste railway. Convention signed ceding to Bulgaria the Turkish portion of the Dedeagatch railway with the territory between the River Maritza and the frontier.

JULY 23RD.—Germans cross the Narev between the forts of Obryte Pultusk and Rozhan. Austrian warships bombard Ortona and the Tremiti Islands; Italian aeroplanes bombard Innsbruck. Turkish attack in Gallipoli repulsed. Third American Note to Germany *re* the "Lusitania" published.

JULY 24TH.—French storm German defences from La Fontenelle to Launois in the Vosges. Turkish and Arab troops defeated on the Euphrates.

JULY 25TH.—German progress along the Narev; critical position of Warsaw; Austrian aeroplane drops bombs on the barracks at Verona. Nasiriyeh on the Euphrates captured from the Turks. American steamer Leelanaw, sunk by German submarine, but crew saved.

JULY 26TH.—Occupation of the Island of Pelagossa in the Adriatic by Italian naval forces announced, and Austrian submarine and aeroplane supply station at Lagosta Island destroyed by French destroyer. Italians established on Monte San Michele: Austrian position and 3,200 prisoners taken at Monte de Sei Busi. German destroyer sunk by British submarine in the North Sea.

JULY 27TH.—Slow German progress along the Narev. French carry further trenches in the Fecht Valley towards Munster. German assaults at Souchez repulsed. Turkish report of sinking of French submarine "Mariotte" in Dardanelles. Mr. Asquith announces total British naval casualties to July 20 as 9,106, and total military casualties to July 18 as 330,959.

JULY 28TH.—Germans force the Vistula between Warsaw and Ivangorod; heavy fighting on the Narev front; Austrians driven across the Bug near Kamienka.

JULY 29TH.—Von Mackensen breaks through the Russian line on the Lublin-Cholm railway. German aeroplanes

drop bombs on Nancy; French aeroplanes bombard Passchendaele on the Ypres-Roulers railway, German bivouacs in the district of Longueval to the west of Combres, German defence works near Rheims, the stations of Chatel in the Argonne and Burthecourt in Lorraine, and an asphyxiating gas factory at Dornach in Alsace.

JULY 30TH.—Germans recapture by use of "flame projectors" part of trenches lost at Hooge. French aeroplanes bombard stations of Dettweiler near Pfalzburg, Freiburg, and Chauny, petrol-producing factories at Peschelbronn between Hagenau and Weissenburg, and aviation sheds at Pfalzburg. Italians attack Austrian second line of defence east of Gradisca to which they have withdrawn. Leyland liner Iberian sunk by German submarine; six of the crew, including three Americans, killed by shell-fire.

JULY 31ST.—Russians evacuate Lublin and Austro-German forces seize the Lublin-Cholm Railway. French aeroplane squadron drops bombs on aviation camp at Dalhem near Morhange and drives off German machines at Chateau Salins.

AUGUST 1ST.—Germans held on the Blonie line west of Warsaw. Heavy fighting on the Narev. German transport sunk by British submarine in the Baltic.

AUGUST 2ND.—Admiralty announce success of British submarine in Sea of Marmora, steamer torpedoed off Mudania Pier, and a small steamer at Karabogha Bay. Germans occupied Mitau, 26 miles south-west of Riga. Successful advances by Australian and N. Zealand A. C. in the Gallipoli Peninsula.

AUGUST 4TH.—Anniversary of the outbreak of war; religious services throughout the Empire. British casualties during the year *killed*: Officers, 4,965, men 70,992; *wounded*: Officers, 9,973; men 241,086; *missing*: Officers, 1,501; men 53,466; *total*: Officers, 16,439; men 365,544.

AUGUST 5TH.—Warsaw evacuated by the Russians.

AUGUST 6TH.—German attacks on Kovno and Ossievitz. British landing at Suvla Bay in the Gallipoli Peninsula.

AUGUST 7TH.—Renewed attacks on Kovno repulsed.

AUGUST 8TH.—A small patrol boat, H. M. S. Ramsay, sunk in the North Sea by German auxiliary cruiser Meteor. Meteor scuttled to avoid capture. British auxiliary cruiser sunk by a submarine in Norwegian waters. Hard fighting in the Argonne. Attempt by German fleet to force the entrance of the Gulf of Riga repulsed. Turkish battleship Barbarossa, gunboat Beik-i-Satvet and a transport sunk in the sea of Marmora by British submarines. Occupation of Bushire.

AUGUST 9TH.—Recapture by the British of the trenches at Hooge, lost on July 30th. Zeppelin raid in England; 25 casualties. Russians evacuated Ossievitz.

AUGUST 10TH.—H. M. S. Lynx, torpedo-boat destroyer, sunk by a mine in the North Sea. Lomza evacuated by the Russians. Russians defeat of 11 Turkish divisions in the Caucasus. Successful advance by the Australian and New Zealand Army Corps in the Gallipoli Peninsula.

AUGUST 15TH.—Cotton declared absolute contraband by Great Britain and France. British advance at Suvla Bay. Bombardment of Dilbar in the Persian Gulf.

AUGUST 16TH.—Bombardment of towns on the Northwest coast of England by a German submarine; no casualties and very little damage.

AUGUST 17TH.—Zeppelin raid in England, 46 casualties. Repulse with loss of insurgent tribesmen at Rustam in the Peshawar district.

AUGUST 19TH.—White Star liner Arabic torpedoed off south coast of Ireland, 48 casualties including Americans. British submarine E. 13, having grounded on Danish coast, bombarded by German destroyers until Danish torpedo boats intervened. Naval action in Gulf of Riga. Russian gun-boat Sivoutch and a German destroyer sunk.

AUGUST 20TH.—German fleet left Gulf of Riga, having lost since August 16th 2 cruisers and 8 destroyers damaged or sunk. Damage to German battle cruiser Moltke by a British submarine in the Baltic reported. Fall of Novo-Georgievsk.

AUGUST 21ST.—Counter attack by a Turkish division repulsed in the Gallipoli Peninsula. British advance and capture of ground of "great tactical value".

AUGUST 22ND.—Declaration of war with Turkey by Italy.

AUGUST 23RD.—German destroyers sunk by 2 French destroyers off Ostend.

AUGUST 24TH.—Casualties of Prussians alone amount to 1,740,836 killed, wounded and missing, not counting 645 casualty lists of other parts of the German Empire.

AUGUST 25TH.—Successful raids by Allied air-craft on German camp in France.

AUGUST 26TH.—Renewal of German advance in the district of Vladimir Volinski in Western Russia, Russian evacuation of Brest-Litovski.

AUGUST 27TH.—German submarine destroyed off Ostend by a British aviator, French air raid on Mulheim in Baden.

AUGUST 28TH.—Allied air-raid on German aviation sheds at Ghent. Commencement of incessant bombardment of German front in the west.

AUGUST 29TH.—Renewal of Austro-German advance in Eastern Galicia. Repulse of trans-frontier tribesmen near Chakdara in the Swat Valley.

AUGUST 30TH.—Russian success on R. Strypa in Galicia. Capture by the British of an important tactical feature in the north-west of the Gallipoli Peninsula.

SEPTEMBER 1ST.—General Russki appointed C. in C. of Russian troops in northern region, General Yanushkevich appointed Assistant Viceroy of the Caucasus.

SEPTEMBER 2ND.—German Ambassador to the U. S. A. promised that liners should not be sunk without warning, provided liners did not resist or attempt to escape. Russians evacuated Grodno. Hard fighting on the R. Dvina.

SEPTEMBER 3RD.—Russians retired to right bank of R. Dvina at Freidrichstadt.

SEPTEMBER 4TH.—Allan liner Hesperian torpedoed without warning near south coast of Ireland, 25 casualties.

SEPTEMBER 5TH.—Complete defeat of Mohmands at Shabkadr on N. W. Frontier of India, enemy's casualties about 1100, British casualties 111.

SEPTEMBER 6TH.—Tsar assumes command of the Russian forces in Western Russia, Grand Duke Nicholas appointed Viceroy of the Caucasus.

SEPTEMBER 7TH.—Russians take the offensive in Eastern Galicia.

SEPTEMBER 8TH.—German Admiralty announces the loss of submarine U 27.

SEPTEMBER 9TH.—Successful action at Bushire in the Persian Gulf.

SEPTEMBER 10TH.—Persistent German attacks on line Osery-Skidel in Western Russia.

SEPTEMBER 11TH.—Zeppelin raid on East coast of England no casualties. Russian captures in East Galicia since September 7th amount to 383 officers, 17,000 men, 33 guns, 66 machine-guns. Recall of Austrian Ambassador demanded by U. S. A. on account of undiplomatic behaviour.

SEPTEMBER 12TH.—Russian capture another 39 officers and 2,500 men in E. Galicia. German advance on Vilna, the Vilna—Dvinsk railway and east of Skidel. Zeppelin raid in England, no casualties.

SEPTEMBER 13TH.—Zeppelin raid on Kent, 4 casualties. French air raid on Treves, Dommary, Baroncourt, Donaueschingen and Marbach. Austrian torpedo-boat sunk by French submarine in the Adriatic. Russian advance in Volhynia. Total Austrian and German prisoners taken by the Russians from August 13th to September 13th amount to over 40,000.

SEPTEMBER 14TH.—French air raid south east of Metz. Russians advance from R. Sereth to R. Strypa in E. Galicia.

SEPTEMBER 15TH.—Allies bombardment of German positions on the western front continues. Russian line runs from Riga, east of Dvinsk, Vilna, Slonim, Piusk, Rovno, and Dubno, thence east of Tarnopol, west of R. Strypa to the

Dniester and thence along the Dniester to Roumanian frontier.

SEPTEMBER 16TH.—Admiralty admit loss of submarine E.7 in the Dardanelles.

SEPTEMBER 17TH.—Official account of Zeppelin raids on London gives the week's casualties as 38 killed and 124 injured.

SEPTEMBER 18TH.—Fall of Vilna; Russian forces in grave peril of being surrounded. Renewed German attacks on Dvinsk.

SEPTEMBER 19TH.—Bulgaria mobilizes and announces an armed neutrality.

SEPTEMBER 21ST.—Successful Russian retreat from Vilna; Germans repulsed near Vilna, and are driven out of Smorgon.

SEPTEMBER 23RD.—Russians reoccupy Lutsk in Volhynia. Russian success at Vileika, east of Vilna, Germans driven back near Pinsk behind the Ogiuski Canal. Greece mobilizes in reply to Bulgarian mobilization.

SEPTEMBER 25TH.—Great Allied Advance in France, British attack to the east of Grenay and Vermelles, capturing the western outskirts of Hulluch and the village of Loos, and progress near Hooge; the French gain the cemetery at Souchez and the remainder of the Labyrinth, and in Champagne break the German lines.

SEPTEMBER 26TH.—French and British gains consolidated. French capture Souchez and reach La Folie and make further progress in Champagne.

SEPTEMBER 27TH.—British offensive east of Loos progressing. French before Germans second line in Champagne. General Evert defeats German forces near Vileika.

SEPTEMBER 28TH.—Further British progress around Loos facing the German third line. Defeat of the Turks at Kut-el-Amara on the Tigris; they retreat towards Bagdad. Terms of Anglo-French loan in United States settled; \$500,000,000 Five-year Five per Cent Bonds to be issued at 98.

SEPTEMBER 29TH.—French engaged with the German

second line in Champagne at the Butte de Tahure and at the Navarin Farm. French reach Hill 140 in the crests of Vimy.

SEPTEMBER 30TH.—Further French progress in Champagne, and also at Neuville. Von Mackensen masses 250,000 guns on the Serbian frontier.

OCTOBER 1ST.—Foreign Office announcement that German officers have been arriving in Bulgaria. French progress in Artois on the heights of La Folie, and in Champagne.

OCTOBER 2ND.—Bulgarian forces massing on the Serbian frontier. German battalion attempting to cross the Danube at Semendria repulsed by the Serbs. Germans again threatening Dvinsk with envelopment.

OCTOBER 3RD.—German counter-attack against British positions succeeds in retaking the greater part of the Hohenzollern Redoubt.

OCTOBER 4TH.—Russian Ultimatum to Bulgaria; Russian Minister to leave Sofia if Bulgaria "does not within 24 hours openly break with the enemies of the Slav cause and of Russia" and expel all German and Austrian officers. Debate in the Greek Chamber; a vote of confidence in M. Venetzelos's policy of assistance to Serbia passed. Turks defeated in the Caucasus near Van.

OCTOBER 5TH.—Allied Forces land at Salouika, at invitation of Greek Government; M. Venetzelos, informed by King Constantine that he cannot support his policy, resigns. Lord Derby appointed Official Director of Recruiting.

OCTOBER 6TH.—Austro-German invasion of Serbia begun; the Drina, Save, and Danube crossed. New French advance against German second line in Champagne, the Hill of Tahure and the district beyond the Navarin Farm taken. German assaults on Dvinsk; desperate fighting at Grand Grunvald; attempts to cut Riga-Dvinsk railway.

OCTOBER 7TH.—French gain ground in "The Trapeze," south-east of Tahure. Fighting at Garbounovka, nine miles from Dvinsk. Sir Ian Hamilton reports a gain of 300 yards

along the whole centre—four miles—of the Suvia front in the past month. M. Zaimis Premier in Greece.

OCTOBER 8TH.—German attack on Loos repulsed; British gain possession of a German trench 500 yards west of St. Elie. Petrograd *communiqué* announces German transport shelled and destroyed by British submarine in the Baltic.

OCTOBER 9TH.—Belgrade occupied by Austro-German troops. General Ivanoff advancing in Galicia. German steamer Kufsa, of Lubeck, torpedoed by a British submarine in the Baltic.

OCTOBER 10TH.—Heights south of Belgrade captured by the Germans. French progress in Souchez Valley, Givenchy Wood, and the ridges towards La Folie; French gains in Champagne extended. Germans driven out of Garbounovka.

OCTOBER 11TH.—Bulgarians cross the Serbian frontier east and south-east of Nish. Semendria, on the Danube, captured by the Austro-German forces. General Ivanoff breaks the Austro-German line at Hajvoronka, on the Strypa; French progress north-east of Souchez and on the heights of La Folie; French dominate La Goutte ravine in Champagne. German steamers torpedoed by British submarines in the Baltic.

OCTOBER 12TH.—German progress south of Belgrade; Pozarevatz attacked. Greek Government declines to assist Serbia. French progress in Champagne; Russians attack on the line from Dvinsk to Smorgon. Italian success in the Carnia. Miss Edith Cavell shot by order of German Court-martial in Brussels for harbouring Allied soldiers and helping them to escape.

OCTOBER 13TH.—M. Delcasse, French Foreign Minister resigns. British take German trenches behind the Vermelles-Hulluch road, and the main trench of the Hohenzollern Redoubt. Russians driven back across the Strypa. Zeppelin raid on the London district; 32 civilians killed and 95 injured within, and nine killed and six injured outside the area, and 28 military casualties.

OCTOBER 14TH.—Bulgaria at war with Serbia; war declared by Great Britain. Pozarevatz stormed and taken by the Austro-German forces south of the Danube. Russian success at Vessolovo, near Dvinsk. Fighting on the Strypa at Hajvoronka; Germans driven across the river.

OCTOBER 15TH.—Heavy fighting between French and Bulgarian troops at Valandova, near the Salonika-Nish line. French gain possession of the summit of Hartmannsweilerkopf in the Vosges.

OCTOBER 16TH.—Austro-German forces 10 miles south of Belgrade. Franco-Serbian forces repulse Bulgarians at Valandova. Russians repulsed at Gross Eckau. Petrograd announces five German transports sunk in the Baltic by a British submarine. British Government declares a blockade of the Bulgarian coast.

OCTOBER 17TH.—Austro-German troops 15 miles south of Belgrade. Bulgarians capture Egri-Palanka and cut the Nish-Uskub railway at Vrania, Allied Note to Greece; Cyprus offered to Greece in return for participation in the war.

OCTOBER 18TH.—German advance on Riga; Borkowitz on the Dvina captured. Heavy fighting on the Styr; Russian success at Chartoryisk. Austro-German troops 20 miles south of Belgrade; Obrenovatz on the Save taken. Fierce fighting between Bulgars and Serbs at Vrania; 20 miles of railway line in the hands of the Bulgarians. Italy declares war against Bulgaria. Two German steamers torpedoed by a British submarine in the Baltic. General Sir C. C. Monro appointed to the command of the Mediterranean Expeditionary Force in succession to General Sir Ian Hamilton. Sir Edward Carson resigns from the Cabinet.

OCTOBER 19TH.—German attacks on British positions from the Quarries to Hulluch and at the Hohenzollern Redoubt repulsed. German advance on Riga; fighting at Olai, 12 miles south-west of the city. Two more German steamers torpedoed in the Baltic by a British submarine. Lord Derby's speech on recruiting; recruits to enlist at once

MAY 12TH.—H. M. S. Goliath and submarine A. E. 2 sunk in the Dardanelles. S. African forces captured Windhoek, the capital of German S. W. Africa.

MAY 13TH.—French captured Notre Dame de Lorette, north of Arras.

MAY 14TH.—Austro-Germans reached R. San.

MAY 15TH.—German offensive in Russian Baltic Province-stops. Russian counter stroke at Opatov.

MAY 16TH.—British success at Festubert. Russian success at Shavli in the Baltic Provinces.

MAY 17TH.—Further British advance in the Gallipoli Peninsula. End of 2nd battle of Ypres.

MAY 18TH.—A National Government of all parties decided on in England.

MAY 19TH.—Considerable advance by the Allies in the Gallipoli Peninsula.

MAY 21ST.—Russian counter offensive to facilitate evacuation of Przemysl.

MAY 23RD.—Italy declared war on Austria.

MAY 24TH.—Italians invaded the Trieste Province.

MAY 25TH.—Italians invaded the Trentino Province. Coalition cabinet formed in Great Britain.

MAY 26TH.—H. M. S. "Triumph" sunk by a submarine in the Dardanelles.

MAY 27TH.—H. M. S. "Majestic" sunk in the Dardanelles.

MAY 28TH.—Auxiliary ship "Princess Irene" blown up at Sheerness.

MAY 30TH.—British captured Spinkhaven on L. Nyassa.

MAY 31ST.—British advanced up R. Tigris and defeated the Turks north of Qurnah.

JUNE 1ST.—French capture Souchez and Carency.

JUNE 2ND.—British stormed Chateau Hooge, north of Ypres. Russians evacuated Przemysl.

JUNE 3RD.—Italians crossed R. Isouzo in Trieste Province. Germans occupied Przemysl.

JUNE 4TH.—British in Mesopotamia take Amara on R. Tigris.

JUNE 5TH.—Germans attacked Moscizka, east of Przemysl.

JUNE 6TH.—Naval action in the Baltic, Russian submarines damage 3 German men of war.

JUNE 7TH.—Zeppelin returning from the raid in England destroyed by a British aeroplane between Ghent and Brussels. Another Zeppelin burnt in its shed north of Brussels. Russians retired from Bukovina.

JUNE 8TH.—Italians captured Monfalcone at the mouth of R. Isonzo.

JUNE 9TH.—2 British torpedo boats sunk by a submarine in the North Sea.

JUNE 11TH.—A British and French force captured Garua in the Cameroons.

JUNE 13TH.—Belgians forced the crossing of the R. Yser at Dixmude. Germans advance between Sienawa and Moscizka in Galicia.

JUNE 15TH.—Lord Hardinge's term as Viceroy of India extended to March 1916.

JUNE 20TH.—Zolkiev and Rava Ruska captured by the Austro-German forces.

JUNE 21ST.—Metzeral captured by the French.

JUNE 22ND.—Recapture of Lemberg by the Austro-German Armies. Sondernach, south of Metzeral, captured by the French.

JUNE 26TH.—General Sukhomlinoff, Russian Minister for War, resigns. General Polivanoff succeeds him.

JUNE 27TH.—Germans capture Halicz.

JUNE 28TH.—British attack on Achi Baba in Gallipoli; the Boomerang Redoubt and three lines of Turkish trenches captured. Germans bombard Windau on the Baltic coast.

JUNE 29TH.—Turkish attempt to retake trenches in Gallipoli beaten off. Allied forces in the Central Cameroons occupy Ngamdere.

JUNE 30TH.—Germans cross the Gnila Lipa. H. M. S. Lightning damaged by a mine or torpedo.

JULY 1ST.—The Armenian, a Leyland liner, chased, shelled, and finally sunk by a German submarine; 29 of the crew, mostly Americans, drowned. Germans capture Zamosc and Krasnik.

JULY 2ND.—Naval action between Russian and German warships in the Baltic off the coast of Gothland; German battleship Pommern torpedoed and sunk by British submarine; German mine-laying cruiser Albatross chased by four Russian cruisers and ran ashore. Italian attack on the Carso plateau begun. Turkish attacks in Gallipoli repulsed.

JULY 3RD.—German attacks on the Calonne trench on the heights of the Meuse repulsed. German sea-plane and aeroplane off Harwich chased away by British machines. South African offer to organize and equip an oversea volunteer contingent.

JULY 4TH.—British force from Aden, which had fallen back on Lahej before a Turkish force from the Yemen, attacked and retires to Aden. The German cruiser Konigsberg, which had sheltered in October up the Rufiji River in German East Africa, destroyed by the monitors Severn and Mersey. Determined attack by the Turks in Gallipoli repulsed.

JULY 5TH.—Archduke Joseph of Austria defeated by the Russians north-east of Krasnik on the line Urzedow-Wilkolaz-Bychawa; Germans repulsed between the Vieprz and the Bug. Fighting round Souchez; Arras bombarded.

JULY 6TH.—German attack on Russian lines at the Ravka. British capture 200 yards of German trenches southwest of Pilken to the north of Ypres. Germans attack at the St. Mihiel wedge and pierce the French line in one place. Offer of the South African Union to raise an Imperial contingent accepted.

JULY 7TH.—French attacks at Souchez carry a line of German trenches. Italian attacks on the bridge-head at Gorizia.

JULY 8TH.—German attempt to regain trenches south-west of Pilken repulsed. French recapture some lost trenches between Fey-en-Haye and the Bois le Prete; French success at Fontenelle north of St. Die; Germans recapture part of trenches at Souchez. Italian cruiser Amalfi sunk by Austrian submarine in the Upper Adriatic. National Registration Bill passed the House of Commons.

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JULY 10TH.—Text of the German reply to the United States Note *re* the Lusitania published; German action defended and proposal made that Americans should travel in their own or neutral ships, specially marked and with sailings notified in advance.

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JULY 13TH.—French aerial squadron bombard and destroy German stores at Vigneulles in the St. Mihiel wedge, and throw bombs at Librecourt between Douai and Lille. Crown Prince captures portion of the French line at Vienne le Chateau in the Argonne.

JULY 14TH.—German offensive on the Narev front; Prasnyz captured. New German offensive develops in the direction of Riga. French capture a line of trenches south of Souchez. Fighting at Nasiriye where the Turks were driven from their position on the Euphrates by a British expedition from Qurnah. National Registration Bill passed the third reading in the House of Lords.

and to be called up as required in 46 groups.

OCTOBER 20TH.—Germans capture the bank of the Dvina from Borkowitz to the mouth of the Berze. Russians carry German positions east of Baranovitchi, taking 3,500 prisoners. Germans advance in Serbia progressing; 25 miles south of Belgrade. Bulgarians occupy Veles; Allied forces on the front Strumnitza-Krivilak.

OCTOBER 21ST.—Ivanoff defeats the Austro-German forces at Novo Alexinetz, north of Tarnopol, taking 7,500 prisoners. Bulgarian attack on the Salonika—Nish railway progressing; 100 miles of line captured and Kumanovo occupied. Bulgarians repulsed by French troops near Rabrovo, south of Strumnitza. British Fleet bombards Dedeagatch; 1,000 Bulgarian soldiers killed. Russian Fleet bombards Varua.

OCTOBER 22ND.—Bulgarians occupy Uskub; Allies forces in touch with Bulgarians at Krivilak; Bulgarians again repulsed by French at Rabrovo. German success near Dvinisk; Illutsk stormed. General Italian advance; 1,000 prisoners taken on the Isouzo front. The King's Message to his people; appeal to men of all classes to enlist.

OCTOBER 23RD.—Germans across the Danube at Orsova; Bulgarian Army under General Bojadjeff crosses the Timok and occupies Prahovo. German cruiser Prinz Adalbert torpedoed and sunk by a British submarine in the Baltic.

OCTOBER 24TH.—French capture "The Courtine" in Champagne, south of Tahure. Furious fighting before Riga; Germans capture island of Dahlen in the Dvina.

OCTOBER 25TH.—Franco-Serians recapture Veles, and threaten Uskub; Bulgarians retire on Ishtip. Austrians occupy Kladovo, and are almost in touch with the Bulgarians. Further French progress at "The Courtine."

OCTOBER 26TH.—Austro-German and Bulgarian forces in touch at Lieubichevatz; Austro-Germans within 20 miles of Kragujevatz; Serians retiring along the line Zaitchar-Kragujevatz. War office announces torpedoing of British transport Marquette in the Aegean Sea. Slight German progress in

the Dvinsk region.

OCTOBER 27TH.—Austrians across the Drina east of Vislegard; Montenegrins fighting in this sector. Uskub retaken by Serbians. Varna bombarded by the Russian Fleet. Total Italian captures for a week along the Isonzo front over 5000.

OCTOBER 28TH.—French Ministry resigns; new Cabinet being formed with M. Briand as Premier and Minister for Foreign Affairs and General Gallieni as Minister of War. Mr. Tennyson announces in House of Commons that Lieutenant-General Sir Bryan Mahon is in command of British Forces in the Balkans.

OCTOBER 29TH.—Bulgarians recapture Veles; Strumuitza occupied by the French. General Joffre in London. Total British casualties to October 9, 493,294.

OCTOBER 30TH.—Germans retake summit of the Butte de Tahure; otherwise defeated in an attack in Champagne.

NOVEMBER 1ST.—Germans attempt to cross the Dvina above Friedrichstadt but were unsuccessful.

Russian Troops reported to be concentrating at Odessa and Sevastopol. Russian fleet bombard Varna and Bourgas.

Desperate fighting at Pirot. Violent German attacks and bombardment in Champagne. Auxiliary Sweeper H. M. S. "Hythe" sunk, 10 crew, 2 military officers and 143 men missing.

NOVEMBER 2ND.—Russians make successful counter attacks at Dvinsk. Fierce fighting in the Strypa region, 5,000 Austrians captured.

Heavy fighting in Champagne between Tahure Hill and the Courtine. Attack made by masses of troops brought from the Russian Front.

NOVEMBER 3RD.—Bulgarians take the Kachanik Pass. Zeppelin destroyed by accident near Namur. Desperate fighting between Tahure Hill and the Courtine. All the German assaults driven back. Anglo French force occupy Tibati in the Cameroons.

NOVEMBER 4TH.—Russians report heavy German attacks N. W. of Tchartoryisk and Tarnopol. Russians make a successful counter attack taking 400 Austrians prisoner. French submarine sunk in Sea of Marmora.

NOVEMBER 5TH.—Fierce fighting at Givenchy, and at La Courtine. Russians gain some ground round Illuxt, at Lake Seventen. Successful Forest fighting west of Tchartoryski. Heavy fighting N. W. of Goriza. Kragujevatz evacuated by the Serbians. Turks make 4 attacks on the extreme right of Auzac. British forces capture the Banyo Mountain in the Cameroons after hand to hand fighting with dynamite bombs.

NOVEMBER 6TH.—Artillery fighting on Western front.

Serbians defeat the Bulgarians at Izvor after a battle lasting several days. Bulgarians retreat towards Kuprulu and also evacuate the R. bank of the Vardar.

NOVEMBER 7TH.—Russians make a surprise attack on the Strypa and capture 8,500 prisoners, a number of officers and machine-guns. Desperate fighting in the regions of Riga, Jacobstadt, Dvinsk, Styr. Fighting between the Bulgarians and French at Krivolak.

NOVEMBER 8TH.—Violent artillery actions especially in Artois, at Loos and Givenchy Sectors and in Champagne, east of Tahure and North of Massiges. Russians take 1000 prisoners at Kolki and in the lake country East of Vilna.

NOVEMBER 9TH.—Italians take the fortified snow clad summit of Col-di-Lana. Lord Kitchener leaves for Salonika. German Cruiser "Undine" torpedoed between Trellborg and Sassnitz. French defeat the Bulgarians on the Vardar taking 2 guns.

NOVEMBER 10TH.—Artillery fighting only on the W. Front.

Russians at Budki capture 2000 prisoners and 20 Machine-guns. Bulgarian attack on Monastir driven off. S. African contingent to be sent to E. Africa.

NOVEMBER 11TH.—Artillery fighting and mining in the Loos and Souchez sectors. Petrograd reports that General

Ivanoff's armies in Volhynia captured during the last 10 weeks 125,000 prisoners. German Cruiser Frauen-Lob reported to have been torpedoed.

NOVEMBER 12TH.—Serbians retake the Kachanik Gorge. Serbian Government move from Mitovertza to Krushevo. Germans occupy the entire line of Kralievo, Kragujevatz, Patrovats. S. S. Mercian attacked by a submarine in Mediterranean but escaped with a loss of 23 killed, 30 missing, 50 wounded.

NOVEMBER 13TH.—Comparative quiet in France. E. 20 reported as sunk in Sea of Marmora. S. S. Southland with Australian troops on board torpedoed.

NOVEMBER 14TH.—Russians drive the Germans back to within 10 miles of Mitau. French get within 7 miles of Kuprulu after heavy fighting. British on the French right also advance. Dedeagatch bombarded by the Italian cruiser Piemonte.

NOVEMBER 15TH.—Heavy fighting at Illuxt. Fighting with the Bulgarians on the left bank of the Cerna.

NOVEMBER 16TH.—Bulgarians threatening Prilep and Monastir.

NOVEMBER 17TH.—Shah declares openly that he is the friend of Russia and England, despite German intrigues. Hospital Ship Anglia blown up by a mine, casualties about 85.

NOVEMBER 18TH.—Violent French bombardment of German trenches. French Chamber decide on the unrestricted use of asphyxiating gases by the French Armies. British success at Valandovo-Rambrosho, French drive the Bulgarians out of Kastorino.

NOVEMBER 19TH.—The 52nd Division makes a most successful attack in the region of Krithia. Heavy fighting round Goriza.

NOVEMBER 20TH.—Monastir threatened. 5000 Serbians forced from the Babrina Pass after holding out against 50,000 Bulgarians for 16 days. Zeppelin, 18, reported to be destroyed at Tondern while being inflated.

Nov. 21st.—Usual artillery bombardments in France.

Germans reported to have withdrawn 7 Army Corps from Russia. Lord Kitchener visits Athens.

Nov. 23RD.—Serbians fight successful rear guard actions at Gaillona. Artillery bombardments in Artois, Champagne, Velikapiana, Mt. Gegovatz and Alsace. Germans reported to be sending quantities of munitions to Bulgaria down the Danube in lighters. Desperate fighting on the Italian Front. Italians take Doberdo.

Nov. 24TH.—Artillery duels in France. Commonwealth decide to bring the Australian contingent up to 300,000 men by next June. Germans report that 300,000 Russians are concentrated on the Rumano-Bulgarian Frontier. Berlin also reports 200,000 at Odessa, 80,000 at Ismail, and 70,000 at Reni. The four Entente Ministers send Greece a note asking for her attitude to be defined.

Nov. 25TH.—Violent Austrian counter attacks against Col-di-Lana, Zagora, and Oslavia are all repulsed, San Martino taken. Brisk and successful fighting on the Riga front. Serbian Government moves to Scutari. French attack the Bulgarians at Krivolak. Desperate fighting between the Bulgarians and Serbians at Prilep.

Nov. 26TH.—Vigorous fighting round Goriza. French subscribe Fr. 20,000,000,000 in one day to the War Loan. After 40 hours battle 25,000 Bulgarians drive the Serbian defending force, 4,000 strong, from Prilep to Karasson.

Nov. 27TH.—Usual trench fighting in France. Violent struggle in the Labyrinth. All quiet on Eastern Front. Goriza being steadily bombarded. Turks in the Dardanelles make three unsuccessful attacks on British trenches. Swiss reports say that Germans are sending large forces into Servia. Allies withdraw without loss to the left bank of the Cerna. Bulgarians within 20 miles of Monastir.

Nov. 28TH.—Kaiser appears on the Eastern Front to encourage his troops. Greek Government reply to and accept in the mail the entente note. Main Serbian army in position parallel to the Albanian Frontier basing on Durazzo. Anglo-

French forces in the Cameroons closing on Jaunde.

Nov. 29TH.—Heavy snow in Serbia. Serbians retiring from Prizrend.

Nov. 30TH.—Turkish strength at Ctesiphon reported as 4 divisions. One division was wiped out. British force retires lower down the river.

DEC. 1ST.—British Casualties to date 510,230, of that number 4,620 officers and 69,272 men killed on the Western Front and 1,504 officers and 21,531 men killed in the Dardanelles.

DEC. 2ND.—Trench fighting and air raids in France. Bulgarians reach the Greek Frontier. 6,000 Austro-German troops reported to be at Rustchuk.

DEC. 3RD.—General Joffre appointed C.-in-C. of the National Armies of France. Nothing to report on Western Front where rain is falling heavily. Austriaus and Germans enter Monastir. Montenegrin success at Fotcha.

DEC. 4TH.—Heavy fighting at Goriza in snow storms.

DEC. 5TH.—Heavy fighting in Strumnitza region.

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"Recognising that the Domiciled Community of India is of value for military purposes, what is the best method of utilising it? Suggestions for its organization and training."

BY R. B. EWBANK, I.C.S.

The term 'domiciled community' is one that it is extremely difficult to define. Legally, if it means any thing at all, it would probably be applied to all foreigners whose domicile of origin is abroad, but who by taking up their residence permanently in India have made it their domicile of choice. Common usage however rules out this explanation. The term is one that has been brought into currency by journalists during the last few years to describe Europeans permanently settled in India and that section of the population who are of mixed European and Indian descent, but who now regard with great disfavour the term 'Eurasian' by which they were previously known. Even this description is inconveniently vague, since it covers persons in every rank of society, varying in race from the pure European to the Indian, in whom the strain of European blood is practically undiscernible. At the outset therefore an attempt must be made to fix the meaning of the term more precisely and to define which part of this heterogeneous community it is that has a special military value.

It may be assumed that the European settled in India and the man of mixed but predominantly European descent would have much the same military value as the ordinary Englishman born in Europe. This has been recognised in Army Regulations India, which make any British subject

Domicilled Community of India.

of European parentage, eligible to enter the British service, and define 'European parentage' as including "a person whose father and maternal grandfather or whose mother and paternal grandfather were of pure European origin, or who is the child of a marriage between persons of the above descent." To this section of the domiciled community a career in the Army is already open without any restriction, and in order to make enlistment easy, special recruiting stations have recently been established. It may be assumed therefore that no further suggestions are invited with reference to it. The subject matter of this essay will be the other section of the community, which is at present debarred by birth from enlistment in either the British or the Indian Army.

It is clear that the members of a community, which includes persons of such varying degrees of mixed descent, cannot all be of equal military value, and that some criterion must be established to differentiate those who may be supposed to possess the special military qualities which distinguish the community from those who possess them faintly or not at all. It is difficult to generalize about so diversified a body, but it would probably be true to say that the special qualities which we would expect to find in it are, firstly, unquestionable loyalty springing from a complete community of interest and sentiment with the British race, secondly, a capacity to work without inconvenience in a tropical climate and a readiness to serve continuously in India, and thirdly (though perhaps less marked) a capacity to work more or less harmoniously alongside of either Europeans or Indians. The simplest method of distinguishing in which portion of the community these qualities might be presupposed, would be to impose a mechanical test and require that at least one of the two grandfathers should be of unmixed European descent. But the plan would be arbitrary and liable to evasion, and would certainly not ensure that the qualities sought were really present. In practice it would probably be found more effective to rely on

some such empirical tests as the following. Firstly, they should be Christians, in order to secure that to a large extent they will share the moral and intellectual outlook of Europeans. Secondly, as far as circumstances allow, they should follow European manners with regard to food, clothing, etc. Thirdly, they should habitually use the English language. Fourthly their schooling and early upbringing should have been conducted on European lines. And lastly they should retain very distinct physical signs of their European ancestry. The proposals made in this paper for the military employment of the domiciled community are put forward on the assumption that they refer only to that section of it which is not of "European parentage", but satisfies the above five conditions as a minimum, the remainder of the community being excluded as of no special military value.

In order to clear away any misconceptions about the magnitude of the problem confronting us, it will be well first to note the numbers of the community and to ascertain its present social and economic status. In the Imperial Census[1] of 1911 the number of Christian Anglo-Indian males in India was returned at 51,232, forming an entirely urban population, scattered over all parts of the country, but chiefly over Bengal and Madras. Between the ages of 15 and 30 years the number of males was 14,956, from which it may be estimated that the number between the recruiting ages of 18 and 25 years can not have exceeded 7,000. The designation 'Anglo-Indian,' which was substituted in 1911 for the previous term 'Eurasian,' was intended by the Census officers to include all persons of mixed European and Indian descent, but there is no doubt that it was to some extent abused. This is proved by the unnatural increase of 15 per cent that occurred in the numbers of the community between 1901 and 1911. It is reported that while only a few Anglo-Indians returned themselves as Europeans, a large percentage of native Christians

[1] Imperial Census Vol. I, Part I pages 140 and 145 and Part II Table XVIII.

Domlopped Community of India.

caused themselves to be shown as Anglo-Indians. In the light of this fact and of the five minimum tests suggested above, we should probably not be making an underestimate, if we were to take it that the community does not contain altogether more than 4,000 males eligible for recruitment.

These figures are enough to show that politically the community is far more important than it is numerically, and that in fact it does not yet constitute a very considerable military asset. Fortunately additional statistics are available which confirm this conclusion and still further dwarf the dimensions of the problem. A special occupational census [2] of the Anglo-Indian community was taken in 1911 which revealed the fact that the total number of actual male workers was 21,028, and that the chief occupations followed by them were as follows:—

			Number employed.
A. CLERICAL, ADMINISTRATIVE & GENERAL.			
1. Owners, Managers and Clerks in Mines and Industries	...	...	...1,073
2. Owners, Managers and Clerks engaged in transport work	...	...	...5,892
3. Persons engaged in trade	...	...	...1,254
4. Public Forces—			
(a) Commissioned and Gazetted		...	... 135
(b) Others	...	...	... 503
5. Public Administration—			
(a) Gazetted	...	...	... 431
(b) Others...	...	...	...2,251
6. Lawyers, doctors and teachers.	...	...	...1,168
7. Other arts and professions	...	...	... 694
8. Living on private incomes	...	...	...1,189
9. Miscellaneous Contractors, Clerks, Cashiers.	...	...	...2,014
B. Occupations entailing Manual Labour—			
1. Cultivators ...	...	...	... 81
2. Labourers & Artisans in Mines and Industries	...	...	...1,200
3. Labourers, Cartmen, Boatmen, etc. engaged in transport.	...	...	...1,524

[2] Imperial Census of 1911, Vol I, Part II, Table XVI.

4. Miscellaneous labourers, beggars, criminals, etc...	614
4, Domestic service	462

These figures have been quoted in detail because they throw a very important light on the whole question. It may be safely assumed that the vast majority of persons in class A are drawing much better pay than service in the Army would procure. They belong to the professional, clerical, and lower middle classes and would with few exceptions be reluctant or unfitted to enlist. This narrows the possible field of recruitment to class B, numbering in all 3881 or (say) 4000. On a liberal estimate not more than one fifth of these persons would be between the recruiting ages of 18 and 25 years' but in order to make full allowance for school-boys and other persons following no definite occupation, who may have been excluded from the return, it may be safer to fix the proportion at one half, and to state the figure at 2000. Again as the majority of these young men would be labourers and menials belonging to the lower classes, it may reasonably be estimated that not more than half of them would be both physically fit for recruitment and able to satisfy the five minimum tests that have been laid down. To this number, in order to avoid all suspicion of underestimating, 500 may be added as possible recruits from class A. The startling results of this calculation is that there are not more than 1,500 Anglo-Indians in India now available for enlistment. When the field is so restricted, we may sweep away at once as chimerical the pleas that are so often heard for a separate Anglo-Indian regiment, and if it is urged that their numbers should be calculated on a 'long service' basis, may ask in reply how the regiment is to be started and what grounds there are for supposing that 'long service' would be acceptable to Anglo-Indians.

Besides disposing of the idea of the possibility of a communal regiment, these statistics suggest other reflections which are relevant to the present enquiry. Firstly, although it is not denied that severe poverty exists among Anglo-Indians and even destitution descending to the terrible depths describ-

ed by Kipling in his 'City of Dreadful Night', nevertheless their average social status is good and the percentage of professional men, public officers, and families living on private means is high. Secondly, their special bias towards work connected with transport, *i.e.* railways, is noteworthy. Thirdly, the number of them that have risen to gazetted rank in the public services both demonstrates their capacity for responsible office and indicates that, since they are already so well represented, there is no urgent need for opening fresh careers to them in the higher branches of the Army or any other service.

This last argument may perhaps be misleading, since there are many occupations in India, nominally open to every one which no man of European descent can undertake without losing some portion of his self-respect. The alternatives to Government and Railway service are in fact for Anglo-Indians very few. It would therefore be a great benefit to them if further openings could be found in the Army and if the employment offered could be such that it provided suitable scope for the various social grades into which the community is naturally divided.

First of all the case may be considered of the young men of the upper classes, of honorable descent and good social position, whose fathers have in many cases borne His Majesty's Commission, but who are at present prevented by their mixed birth from entering the Army. It is not contended that there are many such, but in every province a few would certainly be forthcoming. The history of India during the last two centuries has proved over and over again that men of this class have often first-rate fighting qualities. The records of the 1st Madras European Regiment [3] or indeed of any of the European Regiments in the Company's Army show what forces containing many Anglo-Indians both among officers and men could do. Nor would it be difficult to multiply examples of individ-

[3] The Historical Record of the First Madras European Regiment by a staff officer, 1843.

dual Anglo-Indians, who, in the days when a military career was open to them, rose to fame as exceptionally capable officers. Among these probably the best known was the son of a Scottish Ensign by the daughter of a Rajput Zaindar, Lieut. Colonel James Skinner, C. B., [4] who has been generally recognised as one of the most brilliant leaders of irregular cavalry that India has known. Almost equally famous was Sir Robert Warburton, [5] sprung from the marriage of an English officer with an Afghan princess, who for eighteen years controlled turbulent tribesmen around the Khyber pass with a hand of iron. The two sons born to Major Hyder Hearsey [6] and his wife Princess Zuhur-ul-Nissa of Cambay, distinguished themselves during the Indian mutiny, one at the defence of the Residency of Lucknow and one at Sitapur, and the son of Sir John Hearsey by his Anglo-Indian wife, was selected for special praise by Outram himself. Among the adventurers who during the 18th century commanded the armies of some of the native Chiefs, Major Louis Dorridon, [7] one of the Scindia's most gallant officers, was half Indian and half French, and Major Vickers, [7] who chose to be beheaded by Holkar rather than lead his army against the British, had an Indian mother.

These examples are quoted to show that the community has, as a matter of historical fact, produced brave and able officers in the past, and might be expected, if the opportunity were given, to do so again. On this supposition it is suggested that a relaxation of the rule defining 'European parentage' might be permitted in certain cases, and that the best way to make use of the most promising and well-born Anglo-Indian youths would be for the Government of India to hold an annual Cadet's examination, to which candidates should only be admitted by nomination. Such nominations should be granted with caution, and only to such as

[4] Military Memoirs of Lt. Col. James Skinner, C.B., J.B. Fraser, 1831.

[5] Eighteen Years in the Khyber, Warburton, 1900.

[6] The Hearseys, Colonel Pearse, 1915.

[7] European Military Adventurers of Hindustan, Compton.

were considered to be of good social position, thoroughly British in their manners and habits, of good descent, and sprung from families traditionally connected with the Army. The boy who came out first in the examination, and whose age should not exceed 15, might be sent home to England with an adequate Government scholarship to study for one or two years in an approved public school from which he would be required to proceed to Sandhurst, the rules of which might be modified to admit him. He would pass out on exactly the same terms as his British competitors except that he would be noted for employment in the Indian Army. Such an officer with the same traditions, training and qualifications, as his British brother officers, ought to have no difficulty in making himself acceptable and useful to his regiment and in gaining the respect of his men, as his ancestors did in the days of the Company's Army. If the experiment were made as tentative as possible, and for the first few years no nominations were granted except to those who fell very little short of the standard of 'European parentage', it should be possible to introduce the system gradually without provoking any explosion of feeling in the Army. It should be added that, to avoid injustice, pure European members of the domiciled community should be admitted to the scholarship examination on the same terms as Anglo-Indians.

As the census statistics show, a fairly high percentage of Anglo-Indians enter the learned professions. Those who choose medicine are already eligible for admission to service in the Army. The Indian Medical Service is open to them on the same terms as to all other candidates, and the Indian subordinate Medical Department (Assistant Surgeon Class) is very largely manned by them. Their work has been thoroughly tested, both in station hospitals and on active service, and the general opinion seems to be that on the whole it is very satisfactory. It would not therefore be making a leap in the dark to suggest that the class of men, which already supplies to the Army good Medical officers must be equally capable of

supplying good veterinary surgeons, since the two professions demand very much the same qualities. The present system is such that with the exception of the farriers belonging to the three non-silladar Madras regiments, no Anglo-Indians at all are employed for veterinary work. The reason is, that on the one hand, the interests of the British Army are looked after by the Army Veterinary Service, recruited at home, and in charge of 21 Station Veterinary hospitals at the chief military centres in India, supervising and controlling the work of the Subordinate Veterinary Service, recruited entirely from among men who have gained practical experience in British Units. On the other hand, for the Indian Army there is no distinct Indian Veterinary Service, superior or subordinate. Every Cavalry Regiment has its own independent veterinary hospital controlled by one of the regimental officers and in charge of a Salutry, while the Units of the Supply and Transport Corps employ Indian Veterinary Assistants. They have gone through a training at one of the Indian Veterinary Colleges, but except for occasional help given by the Army Veterinary Service are under no expert control and, if employed by Cavalry Regiments, are not included for the purposes of promotion and pay in a single cadre. The merit of this system, which no doubt owes its origin to the Silladari system, is that each unit is self-contained and has its own separate ancillary organizations. But the arrangement is antiquated and no longer offers good enough prospects to attract the right kind of men. Ever since the days of the Crimean war the need of separate expert services for special technical duties has been increasingly recognised. The change which must soon be made, might well take the form of an increase in the numbers of the Army Veterinary Service and the inauguration of an Indian Subordinate Veterinary Service to take charge of station hospitals for the use of Indian Units. If as a result of the present war the Silladari system is abandoned, the reorganization proposed could be introduced without difficulty, and even if the system is retained, it should not be

beyond the capacity of the Accounts Department to take over existing hospitals, debiting the Silladars with the average expenditure for the last 10 years and treating any additional expenditure involved as a charge on the Army Estimates. The personnel of the new Service should be recruited not from the smiths and farriers, who, though they have obtained practical experience in the ranks, would in the Indian Army usually be more or less illiterate men of low status, but from trained veterinary surgeons who would be forthcoming from the Indian Colleges on salaries considerably below those expected by such men in England. The regulations of the Service should be so drawn up and pay fixed on such a scale as to attract to it the same class of Anglo Indians as are now recruited by the Subordinate Medical Service, and the training of the two Services, should mutatis mutandis be conducted on much the same lines.

The main bulk of the community which at present finds employment in the railway, postal, and telegraph services or in miscellaneous clerkships, may be placed somewhere between the professional classes and skilled artisans, and this is the section for which openings in the Army are most urgently required. It would not be difficult to suggest ways in which posts might be found for them in the Military Accounts Department, or in the Management of Military Grass Farms or Dairies, or in numerous other quasi-civil capacities, but such work could hardly be regarded as military and would scarcely either satisfy their aspirations or fall within the terms of the title of this essay. It will be enough therefore to select from the possible alternatives one or two openings which may seem to be at once distinctively military and really practicable.

The experience of the Postal and Telegraph Departments which, as may be seen from any Civil List, employ a large number of Anglo-Indians in responsible posts, proves that this is a class of work which they are specially fitted to perform. Apart from the Wireless Signal Company, there are in the

Army four divisional signal companies,[8] employing in addition to Indians, 52 British non-commissioned officers and 124 British privates (telegraphists). Their work entails a thorough knowledge of communicating by flag, semaphore, helio, field telegraph and telephone. The companies are organised on a permanent basis and intended to train classes of learners. Their duties do not ordinarily call for exceptional courage or endurance. Pay and prospects are very fairly good and the service is self-contained so that the difficulty of the reversion of Anglo-Indians to British Units can be avoided. It is understood that fresh companies will gradually be formed until ultimately each division has its own company, and it is suggested that the privates of at least two of these companies might well be recruited direct from the Anglo-Indian community and trained in the same way as recruits brought in from British regiments. The non-commissioned officers of these companies should of course at first be drawn from the British Army, but as competent men become available might be replaced by promotions from the ranks. A feature of the service which is likely to prove attractive to the right type of Anglo-Indian is that a certain number of telegraphists are transferred annually from these companies to the Government Telegraph Department, where they are found specially useful in big centres or on frontier posts. The advantages, which would follow from the change proposed are, firstly, the economy and efficiency of employing a staff that would be ready to remain permanently in India with only short terms of leave and secondly, the convenience of not having continually to train fresh recruits. In this case, as in all others, it would be well to proceed tentatively and to ascertain that the change can be introduced without any loss of efficiency or discipline, before permitting recruitment to the extent suggested.

The inclination of Anglo-Indians to enter railway service has already been noticed, but in this direction no avenue of

[8] India Army Order 100, dated February 20th, 1911.

employment can be opened up in the Army. Apart from two companies of Sappers and Minors, which are usually engaged in construction work, a class of physical labour for which the Anglo-Indian is unsuited, there is no military railway service in India. On mobilization the Railway Department of the Government of India assumes direct control of any railway system, and has authority to work it with its existing staff. The system, which has recently been perfected, is not likely to be changed. It is only in the matter of road transport that the present arrangements can definitely be said to be defective. The lack of motor-transport is an undoubted flaw in Indian Army organization, which after the experience of the present war calls for an immediate remedy. It may be assumed that several motor units for transport and ambulance work must soon be formed, together with the necessary workshops and repairing stations. As a corollary a separate branch of the Supply and Transport Corps consisting of expert drivers, mechanics, and foremen will come into existence, and though at first it should contain a stiffening of specially trained British soldiers, the experience and practice of the taxi-cab companies of Bombay and Calcutta indicates that it may well be manned chiefly by Anglo-Indians. At the present stage the proposal is so inchoate and dependent on so many uncertain factors, that it is not feasible to go beyond this assertion or to give detailed suggestions for the organization and training of the corps. Motor Transport Companies have since been introduced—Ed.

For the lowest classes of the domiciled community, consisting chiefly of skilled artisans, no more suitable employment could be found than in the Ordnance Department. The supervising staff is at present hardly large enough to cope with all the work which falls upon it in times of pressure, and would certainly find it a great convenience to have under it a body of intelligent and reliable mechanics who could be trusted to carry out their duties with a minimum

of detailed supervision. A precedent for this proposal is afforded by the Madras Army which included a company of East Indians (*i.e.* Anglo-Indian), now disbanded, known as the Carnatic Ordnance Artificers, [9] and composed of 23 foremen and 122 artificers. Most officers who had personal knowledge of them, speak highly of their efficiency and regret that the Company no longer exists. It is of course essential that the factories and arsenals of the Department should be in charge of an absolutely reliable staff, but it is urged that there is every ground for trusting whole-heartedly to the loyalty of the Anglo-Indian and that he would bring to his work many of the valuable qualities which mark the British mechanic. As an experiment a separate company on the lines of the old Carnatic Artificers should be formed, and if it was found successful further companies might be recruited as an economical alternative to increasing the cadre of the British supervising staff.

Within the limits of a paper of this kind, which must necessarily deal not only with the military, but also with the broad economic and social aspects of the question, it has been possible only to sketch proposals in the barest outline. It must not be forgotten that the organization of the Army in India is based on the assumption that there are only two fields of recruitment, firstly the British race, and secondly certain known and tried Indian fighting tribes, and that the intrusion of a class of men alien to both the British and Indian Service will involve many fundamental changes in the Regulations and is a much more serious departure from tradition than might appear. However, if Anglo-Indians are employed at first tentatively, and not in the fighting line, but in the subsidiary services and departments, there is no reason to regard these difficulties as insuperable. The community is so small in numbers, that no heroic measures are called for.

[9] Military Pay & Audit Regulations of Madras Presidency, 1861, page 361.

Domiciled Community of India.

But their connection with the British race is so much closer than that of any other Indian people that every effort should be made to satisfy their reasonable claim to serve the Crown in one of the greatest of the public Services.

LECTURE

By

BRIGADIER GENERAL L. C. DUNSTERVILLE

ON

Some Aspects of the War In France.

YOUR EXCELLENCY, YOUR HONOUR, LADIES & GENTLEMEN,

I hope I may be able to interest you in giving you my personal experiences during 7 months of the Great War, when I was employed under the War Office in France from August 1914 to the end of March 1915.

I do not propose to deal to any great extent with the Political and Strategical aspects, nor with the purely historical point of view. The facts and figures of this Great War, as far as the Censor will let us have them, are just as well known to you as to me. Most of the leading papers give us excellent articles in the tactics and strategy and on the political issues.

I will confine myself, therefore, to what I may call "side lights" on the War, in the form of my own personal experiences, and trust that I may thereby help you to realize the atmosphere in the western zone of operations. You are all in possession of the facts and figures. I will give you merely impressions.

The absence of the black board, of maps and plans will not I hope, dismay you. My reference to maps will be few and general and will not go beyond the knowledge that you all possess of the geography of Northern France from the South East of Paris to the Belgium Frontier.

In the first place, I shall have to tell you how I got there myself. Just before the war broke out, I had been staying at Aldershot for the Brigade Training. Here I found nothing new in methods, but something quite new in the very high standard of efficiency attained.

At the time of the actual declaration of War, I was staying with friends in a small Devonshire village. There was a sigh of relief from those of us who realized all it meant, when the Government decided to throw in their lot with our Continental Allies, but the Devonshire peasant, and the British Public generally, remained very unmoved, and succeeded in thoroughly misunderstanding the situation. They certainly merited the attribute of imperturbability, that trait which is sometimes as much a vice as a virtue. When it meets with the approval of the newspapers, it is spoken of as "that magnificent imperturbability", when the newspapers are angry they call it "callousness and apathy". I daresay it is a compound of all these attributes.

In the village at any rate, the inhabitants did get as far as discussing the situation, and it was then noted that the general inquiry, was "Why should we go to war for Servia"? This showed such a lamentable misunderstanding of the whole issue, that it was arranged that a meeting should be held and the situation explained. I, among others, being invited to speak.

I think I made it pretty clear to them that we were not going to war for Servia, though Servia was for the moment the focussing-point of the disturbance, and incidentally I referred to the question of Universal Liability for service.

Here I came in touch for the first time in my life with the political controversial spirit that poisons English life to-day. Because this subject had been originally taken up by one political party, the whole question of the defence of ones country, and ones duty to the Motherland, had become a political issue, and my guileless speech was classified as political propaganda under false pretences.

The local Radical paper gave a report of the meeting with the following head lines:—

- "Panic-mongers at Bishopsteignton!"
- "Choleric Colonel scares villagers!!"
- "Violation of an honourable truce!!!!"

The last headline referring of course to the fact that party questions were to be put on one side during the war.

Well, that shows you the sort of people you have to deal with when you come up against the Great British Public. Duty and Patriotism made a party issue!

This poisonous political atmosphere was new to me, and it was not even a great consolation when I found on crossing the Channel, that the French were ten times worse. In France they are all politicians in the first place, and representatives of various professions in the second, and there are enough political parties to tempt and bewilder anybody.

Well, having made myself rather unpopular in my endeavours to give the villagers a few facts to ponder over, I thought I had better get up to London and see if a personal application at the War Office would not be more effective than my written one, which so far had produced no result.

It was not easy for a Colonel of the Indian Army to get employment at that time. That wonderful little army of so-called amateurs that the Germans regarded as a tragic joke, was being sent over the seas with clockwork precision, and extra hands were not wanted.

At last, however, just as I was in despair, came the demand for Interpreters, and in that capacity I reported at the War Office on August 23rd and left for France 18 hours later.

I was one of a party of nine officers, the others being "dugouts" of the British Service, all men of considerable talents and ability. When the history of the war comes to be written, it will be seen how valuable have been the services of these so-called "dugouts"; men who had retired from the Army for many years, but who offered their services in the humblest capacity as soon as war broke out.

As we left England we imagined a future for ourselves on the field of battle, helping in billeting, examining German prisoners, taking messages to French troops, and so on. But our destiny was quite otherwise. There was to be no glory

in our task, but we were at least to be allowed to feel useful, perhaps even indispensable, and we were incidentally to have great facilities for observation, our employment being at first on Supply trains.

We were called Train Conducting Officers, and our duty was to proceed with trains from base to railhead, and see that they reached their destinations without delay—not so easy a task as it sounds—hand over our supplies and return to the Base bringing back odds and ends from the Front.

We camped in the trucks among boxes of bacon, cases of stores and rather strong-smelling but excellent cheeses, and ran almost as much risk at that time as men at the front from the French system of shunting, which is simply a series of violent collisions. This is really no exaggeration. I have seen trucks derailed, smashed, buffers knocked off, and we had cases of men with broken ribs and other injuries. It is a very rapid and clever method, but is best to watch it from the outside of a truck.

Later on we were removed from the Supply, and taken over by the Director of Railways, and I was made C.O. of the T.C.O.'s. This meant that I had my office in some central town, and travelled up and down the line as I thought fit, and though I was never able to reach the trenches, we were always just behind the line within sound of the big guns.

I crossed the Aisne in September, and latterly was in Bethune, close to Armentieres. Ypres was also within reach but I was recalled before I had an opportunity of visiting that wonderful and long-suffering town.

The French railway lines have worked marvellously, but the strain on personnel and rolling-stock and permanent way has been very great. In the first place, too many railway men were taken for the fighting units which left too few to run trains and work the shunting yards efficiently. Then the destruction of bridges and the western thrust of the German line from Soissons through Arras to La Bassee has left no choice

of lines, no alternative routes, and with the enormous traffic on the line Rouen—Amiens—Abbeville—Boulogne, and thence along the Belgian Frontier it is a wonder that the road has lasted out, while the rolling stock, with limited facilities and still more limited opportunities, for repair, is still performing marvels, but looking very tired and shaky.

All this explains the need of a T. C. O., an individual who has never been heard of before this war, and who has chiefly been necessitated by the language difficulty for an army operating in an Allies country.

The train never looks very safe, accidents have occurred, and no single journey ever takes place without the T. C. O. being called in to exercise his ingenuity and initiative. Sometimes the train has come in half and had a collision with itself, sometimes it has real collisions, wagons are derailed, hot axles occur and so on. Added to all this is the fact that various trucks have to be cut off at various points *en route* probably in the middle of the night and small parties of men or officers delivered at their destinations. If you have never tried it, you can have no idea what it is like trying to wake the British soldier about 3 a.m. on a cold night, when he is well muffled up in his blanket. The train stops only a few minutes, the yard is unlighted and as the train moves off again without any warning to you, you run the risk of being left behind or travelling for an hour or more on the step of a truck on to which you have jumped at the last moment.

All these matters might, you think, be left to the guard—so they might be—but in that case nothing arrives anywhere.

The train pulls up at daybreak at Railhead, (probably the wrong one) and you find the little parties of men that should have been left at 20 different destinations, cooking their morning meal beside the train, while trucks of ammunition urgently required miles down the line and labelled in every conceivable way to call attention to that fact, are reposing in the yard.

Overnight you talked with the *Chef de train*, polite, amiable, and most anxious to please. He repeated all your instructions most carefully after you, bowed and said good night, and then thought no more about it. Now that things have all gone wrong, you search for him to tell him just what you think of him, and, of course, you find another smiling and amiable fellow who explains that he relieved the other some time ago.

The Main Supply Trains now run under special arrangements, and are made up so simply that they require little supervision. The Train Conducting Officers take charge of "Ramassage" trains, that is trains composed of everything except the bulk supplies.

Of these about 4 to 6 leave the various bases daily for the front. They contain Gifts, Parcels, Mails, Ordnance Stores, Mechanical Transport Stores, Clothing, Ammunition, odds and ends of Supplies, and parties of officers and men for various destinations, not numerous enough to form an entire troop train.

The journey from base to railhead and back lasts as a rule four days. This seems a long time if you measure the distance on the map from Havre to the Belgian Frontier but the trains are necessarily slow and require to be re-sorted at least twice en route, and it takes nearly a whole day at rail-head to discharge one's stores and collect whatever one has to take back. Now that the Germans are holding us back on that long line from Belfort to Nieuport, since October, rail-heads have been fixed, and seldom change.

It was very different, however, in the early days of the war, during the retirement from Mons, and then the forward movement to the Aisne and thence to the present line near Ypres.

During the retirement your destination was as a rule not fixed until you reached the Regulating Station some 30 miles from the enemy, and then you were never certain whether you or the Germans would reach the point first.

Having reached your point you discharge your train as rapidly as possible and take over your miscellaneous load for the return journey. This time your train is filled with very different material, consisting mostly of German prisoners, sick men, light cases for whom no room exists on the hospital trains, wounded horses, battered guns, captured arms, surplus supplies, and small parties of officers and men just out of the trenches proceeding on leave or duty.

The fellows from the trenches are of course vastly interesting, and it is very extraordinary that the humble private soldier is able as a rule to tell a story far more clearly and vividly than the highly-educated officer. The officer is more reluctant to describe his experiences and lacks the direct simplicity of language.

The system of supply is very interesting. It is of course on the lines laid down in the book but with certain modifications and developments. The Sea base, or one of the Sea bases, is Havre. Here an enormous cotton shed—the second biggest shed in the world—has been taken on lease in the docks. The ships discharge their stores on the Quay alongside and the stores are then stacked inside the shed in groups, each group containing every kind of supply, so that several trains can be loaded simultaneously at various points.

In this shed are kept at least ten days reserve supplies for the troops at the front, which represents an enormous bulk. A great deal of moving and handling has to be done, and in order to obviate the use of trained soldiers, on purely fatigue duties, a special branch of the Army Service Corps was enlisted at the beginning of the war. These are the Labour companies. The men are labourers pure and simple, enlisted chiefly from the neighbourhood of docks in the home ports, they wear the same uniform as the rest of the army, and were actually, I believe, at one time given arms and ammunition, which were later very wisely taken away from them.

They are highly paid and do splendid work but they

take a good deal of managing, their behaviour and notions of discipline are not in accordance with military ideas, they have a natural tendency to spend their pay in liquid refreshment, and their chief recreation is the using of their fists and other handy weapons on each other. Still there is no doubt they have been a great success and it would be hard to do without them.

The troops at the front are divided for supply purposes into numbered sections both for convenience of reference and the baffling of spies. Thus a train label will be "3rd Section" instead of "5th Infantry Division".

Subaltern officers of the A. S. C. with a proportion of labourers are told off permanently in reliefs to each section.

These officers and men load up the trains daily, the officer alone accompanies the train to the railhead and hands over to the supply officer there. The advantage of this system is that there is no break in responsibility and the very officer who loaded the train is the officer who hands over the supplies at the front.

At railhead ten motor-lorries convey the stores to rendezvous, horse transport takes them still nearer, to the refilling points, and here the various units must take them over and convey them to their Headquarters.

I spoke earlier of the necessity of having a Train Conducting Officer in the trains. True, for many hours at a stretch he has nothing to do but yawn, but every now and then come moments when it is indispeusable to have a man who can talk the language and who also is capable of seeing that the right thing is done and in the right way.

Towards the end of August as our army was rolling back on Paris, I took a Supply Train up to Compiegne. It was necessarily more important than ever at that time, that the tired men should get their food, but it was a difficult job to get it to them without running into the mouths of the equally hungry Germans. I had a French Railway Officer with me to assist in dealing with the French Railway Staff.

We arrived in the shunting-yard at Compiegne at about 5 a. m. when it was still dark, and I talked over the situation with the French officer. We agreed that as it was impossible for the lorries to be found or to find us till day-break, he should go off to the station and find out how things stood, while I remained with the train.

At about day-break he returned looking very woe-be-gone with the information that the Uhlans were already on us and it would be impossible to issue anything. Orders had been given for the immediate evacuation of the station, and the supplies must be abandoned or destroyed. I suggested that as a third course they might be removed and set about procuring engines for each of the 3 supply trains I found in the yard, one my own and two that had got there no one quite knew how.

I then went up to the station myself and found a very animated scene in which the only point of calm was to be found in the persons of two British Officers standing side by side like Tweedledum and Tweedledee, and reminding me of a small rock in a very stormy sea.

About the same height and necessarily dressed alike, each wore a rather grubby Burberry and smoked a short briar pipe, while they gazed placidly to their front with that sort of unfocussed look in their eyes that only Englishmen can achieve. I do not say that it is an accomplishment to be proud of, but good or bad it is certainly a national trait.

They turned out to be two excellent "dugout" officers who had retired many years previously and who had now come to life again to take part in the Greatest War in the world's history.

But neither the greatness of the War, nor the excited gesticulations of the French officers and officials who surrounded them, seemed to have produced any effect on them at all. I describe this scene at length because it is just typical of so many similar scenes with which I was daily confronted and which both amuse and inspire the vivacious and mercurial Frenchman.

Finding that none of the French could speak English, and that (a very rare event) neither of the British officers could talk one word of French, I explained the situation to them and told them that it was stated that the Germans were already on us and the station was to be immediately abandoned. They said they doubted the urgency, and so did I. There were many reasons which I need not go into now which convinced me that the Germans were very unlikely to be as near as all that. I got out into the town, visited the French Head Quarters, brought back a French Staff Officer with me—an excellent fellow with a soothing manner—and quieted things down at the station. All supplies were issued and we got the empty trains away before the Germans got into the town.

Those first two weeks of the War were perhaps the most wonderful and the most critical of the whole campaign. In the 14 days between August 23rd and September 6th, that "despicable little army", Field Marshal French's, had been flung into the lion's jaws at Mons, had extricated itself by a miracle, had retired fighting on to Paris, had pulled itself together again and was now ready to drive the German army back from the Marne to the Aisne. The German blow was well calculated. Even after the delay caused by the resistance of Liege, the Germans were able to fall on an absolutely unprepared enemy. The British Army, unsupported and nearly surrounded, had to make a rapid retreat and the French Army began its retirement before it ever got even into position.

It was in these early days that the undaunted cheerfulness of our men was perhaps our greatest asset, and it certainly had a very great and beneficial effect on our Allies.

The confusion was considerable, units lost themselves and men lost their units. Here and there battalions were isolated; sometimes companies, sometimes batches of five men, sometimes one man alone, fighting small rear guard actions on their own. But as each unit or group retired it was with tails up and

faces to the foe. With a rather tired smile on his cheerful countenance and singing as ever that ridiculous and senseless song, "Tipperary", the British soldier gave one more the impression of a march home from a field-day than of a flight in terror from a redoubtable foe. There was no thought or suggestion of anything like panic, and just at the moment when the Germans turned aside from Paris under the impression that the British Army had ceased to exist that tough little Army had already begun to stand up for the second round and prepare to chase the Germans from the Marne to the Aisne.

Of all the remarkable things that happened during that retirement none could give a better idea of the confusion that reigned than the following incident.

One morning about dawn a British battalion retiring found itself marching for some miles parallel to another battalion a quarter of a mile off. There was a very slight mist and as the light grew clearer the Commanding Officer put up his glasses to identify the other battalion and found it was a German one!

It was obviously not a situation for fighting or in any way attracting too much attention, so he quietly diverged and separated himself from his unpleasant companions without being detected.

It is interesting to note that at this time the whole of the French Coast was left undefended and the Germans were free to walk into Dunkirk, Calais, Boulogne and Havre which could have offered no resistance.

But as they could not possibly foresee the course the war would take, they neglected to seize the coast and concentrated their strength on Paris. German strategy is seldom wrong and although the seaports were tempting, it would have been fundamentally wrong to alter their plans at a moment like that. It would be an easy task to take Paris, and the seaports would thereby fall into their hands without a blow.

The transference of the French Capital from Paris to

Bordeaux and the move of the English sea base from Havre in the Channel to St. Nazaire in the Atlantic, were necessitated by the proximity of the German army to the Capital. At the same time our forward base with all its huge bulk of supplies had to be moved from Rouen to Le Mans. The latter was a very fine achievement and forms a record of which the A. S. C. may be justly proud.

On a certain day in September 1914, the last supply trains left Rouen for the front and on the next day with no hitch at all the first set of supply trains left Le Mans. When you realize that among other things the advanced base held a reserve of ten days rations for the entire army you may understand the magnitude of this achievement. But as a matter of fact nobody but a Supply Officer can really appreciate the difficulties in a task of this nature.

All this took place in the first week in September and at that time the British soldier was the sole protector of Paris (except the Fortification troops and the Garrison) on the Northern side. Our trains took us round the circular railway, and as we moved very slowly and stopped frequently we were always at the mercy of an enthusiastic and delighted crowd, who kept up a perpetual bombardment of biscuits, chocolates, peaches, buns, etc.

At the stations our carriages and trucks were decorated with bouquets of flowers, and while the crowd outside the palings stood six deep and cheered vociferously, pleasant ladies on the platform poured us out cold coffee and other drinks, while others pressed cigarettes and food on us.

As this was repeated at every station all the way up the line, and as we were actually only a supply train, I thought I must try and do something to put a stop to all this prodigality. So I thought out a little speech in my best French and delivered it at each station when the train stopped.

It ran on the following lines:—

Ladies and Gentlemen,

On behalf of myself and my gallant soldiers, I beg to

thank you very heartily for your kind reception and all the nice things you are giving us. But please understand that we are worthy of none of these things. We carry with us supplies for the whole army, we are well fed and in fact if any of us are out of sorts it is simply and solely from over eating. We have no connection with glory. We have never seen a live German except as a prisoner, and we never shall. Please keep your cheers and your good things for the gallant fellows who pass by in the troop trains on their way to fight."

I delivered this speech at Orleans, Chartres, Versailles, and many other famous places, but I gave it up in the end as I found it had no effect whatever. The reply was, "We don't care what work you are doing or where you are going, but you are dressed in khaki and we must give you all we have!"

Only in one case was it successful and I shall never forget the comical look of pained surprise on the mens' faces as they saw all the nice baskets of pears and peaches fading from their view.

They had naturally not understood the nature of my remarks, but I explained them to them and although their mouths were watering for the delicacies I think they agreed with me, though at the same time I have no doubt that they were delighted later on to find that my eloquence had no effect at other stations.

Enthusiasm kept up at a very high pitch for a long time, but I fancy it must have waned a good deal now that the novelty has worn off. Towards the end of March 1915, instigated by rumours set afloat by pro-Germans or German agents, the peasants of the North West of France, gazing on the thousands of khaki clad figures spread over the land from Havre to Calais, had already begun scratching their heads and saying, "Its all very well you know, but how are we going to get all these Englishmen out of our country again, once the war is over?" Of course serious-minded

Frenchmen would view this idea with a smile, but none the less the suspicion is aroused in the minds of the ignorant.

To return to the summary of events. The retreat from Mons brought the British Army on to Paris at the begining of September, and on the 6th of that month the allied Army found itself in position south of the river Marne, with its left on Paris and its right on Verdun.

The German Army having arrived opposite Paris, had suddenly swung across the allied front and continued its advance in a south easterly direction towards Chalons-sur-Marne. This change of objective is the great wonder of the War, and no one yet has satisfactorily answered the question why General von Kluck turned aside from Paris at the moment when it seemed within his grasp. True the German troops were exhausted and had out run of their supplies, their lines of communication were disorganised and weak, the Crown Prince's Army had failed to carry out its part of the combined plan by breaking through Verdun, and the main French Army was still more or less intact in the Field. All these considerations may have made it seem too dangerous to von Kluck to risk coming up to the walls of Paris, a situation that would deprive him of freedom of manoeuvre. It might thereafter appear best to advance south-east, attack and defeat the French Army in the field and then enter Paris from the East.

Whatever the inducements may have been, the change of direction took place that gave the Allies the opportunity they were not slow to take, of assuming at last the offensive.

One must remember what splendid service was rendered to the cause of the Allies during this critical period by the Russians. On August 29th, 1914, the Russians invested Koenigsberg in Eastern Prussia, and on September 3rd they occupied Lemberg in Galicia, thus keeping the Germans in a very distracted state of mind.

From September 7th to the 11th, the allied offensive was uniformly successful and the Germans were driven back

in confusion to the river Aisne, which they crossed and began to dig themselves in on September 12th and where they are still, more than a year later.

Their retreat was just saved from turning into a rout by the absence on the part of the allies of fresh troops, especially cavalry, to take up the pursuit.

Our own cavalry which had performed prodigies of valour protecting our flanks in the retirement must have been almost worn out and in great need of a rest for both men and horses, and the French Cavalry was no better. This lack of pressure in the pursuit enabled the Germans to burrow into the ground and render their position well-nigh impregnable, and to this is due in no small measure the prolongation of the War.

During this period of the fighting, the train work was very interesting and one had plenty of opportunities for conversation with German prisoners.

It was also just about this time that I began to realize the merits of the motor-lorry drivers. These men are mostly motorbus drivers from London and other big cities at home, they wear the ordinary khaki uniform of the private soldier and they are at all times a pleasure to behold. Their work is hard and often dangerous and they do it with a will.

During the retreat of the Germans from the Marne to the Aisne, I found myself one night at a rail-head—a small country station named Coulommiers. It was the nearest we could get to the army because of broken bridges and others obstacles, but it was a very great distance and the result was that the lorries only turned up at about 2 a.m.

It was one of the worst nights I have ever seen, a hurricane and a deluge, and the country roads were churned up into seas of mud. Yet in spite of all these hindrances every lorry turned up, and turned up smiling, at this obscure little station, took its load and hustled off in the darkness to find its way back to the rendezvous, with the driver looking as cheerful and unmoved as if he were taking

his usual drive on a sunny morning from Piccadilly to Oxford Circus.

Of course it is not merely left to the intelligence of these men to find their way in the dark in a foreign country from point to point—that would be demanding the impossible. They are told off in batches with an officer or an interpreter to guide them. But now and then a lorry has been left behind and the driver has had to exercise considerable ingenuity in rejoining his unit. But it is seldom that he fails to get there.

Among the peculiar services rendered to the War Office during this war must be mentioned that of the small body of gentlemen-chauffeurs. These were mostly members of the Royal Automobile Club, who, finding that their services were not accepted in any other capacity, offered themselves with their own cars, free to government to act as carriers and messengers.

One of these men whom I knew was captured by the Germans in August and escaped a few hours later by a piece of good luck. My friend was told off to escort three motor lorries at about 11 p. m. on a dark night to a certain unit. Owing to the confusion of the retirement the task was not an easy one but he endeavoured to carry it out to the best of his ability. Passing through a small village he demanded of the Mayor a guide who would conduct them to some other village known to be on his route. The village schoolmaster, a young man of about 25, was awakened from his slumbers and detailed for the job. His wife saw him into the car and he told her not to worry, he would be back in half-an-hour as he should have been. But before half-an-hour was over he had been shot by the Germans!

The car and the three lorries had not gone far from the village when they ran into an Uhlan patrol. It was a case of "hands up" and they were promptly captured. The poor schoolmaster being in mufti was at once taken out and shot, perhaps a legal but a very brutal procedure.

During the remainder of the night the car and the lorries followed their captors, sometimes halted and sometimes moving slowly onwards. As day broke they emerged on to a high stretch of open ground, when they came under a burst of shrapnel fire from our own guns. On this the Uhlans dispersed and took cover and my friend with his three lorries turned about and put on full speed for home with a hail of bullets from the patrol whizzing round.

To be recaptured by the Germans would mean certain death, but nothing could disturb the equanimity of the cheerful bus-drivers. At brief intervals they would pull up their lorries, jump down, and dart across a ploughed field to secure some German helmet or rifle as a "souvenir" of the occasion, and their ideas of discipline being very rudimentary, no threats or arguments of my friend had any effect on them. In the end however the whole party got away and finally rejoined the unit for which they had set out, much to the delight of the latter who had begun to get hungry and hopeless.

The path of the armies now lay through the Champagne country, one of the most beautiful parts of France. Empty bottles marked the sites of all the German encampments and trenches and they must have drunk a prodigious amount of that good wine without paying the bill, but the towns and the vineyards were almost untouched, and extraordinarily little damage was done in this district.

Knowing the ruthless love of violence and destruction that has marked the course of the German host, one wonders why this part of the country escaped so lightly. The solution of that problem is that the Champagne district formed part of that area of France which was to be the inheritance of the Crown Prince when the war was over.

With the German Army well on the run, hopes ran high, and even when they crossed the Aisne and dug themselves in behind their network of barbed wire on the reverse slopes of the high ground, it was universally believed that within a

week we should have them on the move again, but these hopes were not destined to be realized, and a year later they are still in practically the same position.

The two armies now faced each other on the line from Soissons to Reims and each set about the task of outflanking the other. The French, in endeavouring to turn the German right near Soissons, compelled the latter to bend Northwards in a right angle leading through Arras in the direction of Belgium.

At this moment, October 7th, Antwerp was being besieged and was evacuated on October 9th, and it was found that a fresh German force was making an advance through Belgium via Ypres on Calais, that is, passing through the gap between the Allies left near Armentieres and the Belgium coast.

To meet this, the British Army, which was very uncomfortably placed in the Aisne in the middle of the French line, was transferred to the left of the line and arrived in the neighbourhood of Ypres just in time to close the gap and keep the Germans out. This was one of the most critical periods of the war and it was just at this moment that the Indian Contingent arrived in the very nick of time and closed the last portion of the gap.

This rapid transference of the entire army from one point to another of the theatre of war was carried out without a hitch and may be considered a very remarkable achievement.

The line of trenches and barbed wire was now complete from Belfort on the Swiss frontier to the Belgian Coast, the last gap was closed, and from that date all manœuvre has become practically impossible, the fighting resolving itself into the hurling of high explosive shells and bombs at each other, and the mining and countermining of trenches.

In his despatches of 20th November 1914, Sir John French thus speaks of the early fighting round Ypres that stemmed the German torrent pouring on to Calais, "No more arduous task has ever been assigned to British soldiers,

and in all their splendid history there is no instance of their having answered so magnificently to the desperate calls which of necessity were made upon them," and later speaking of the work done by the First Corps under Sir D. Haig, he says:—

"Words fail me to express the admiration I feel for their conduct, or my sense of the incalculable services they rendered."

Well may the Commander-Chief search in vain for superlatives to express the splendid behaviour of his troops. The novelty of this horrible war of bombs, high explosives, 18 inch howitzers used as field guns, poisonous gases, flame projectors, aeroplanes, submarines, mines and barbed wire, makes it hard to institute any detailed comparison with any of the wars that have gone before. But we can at least make a comparative estimate of the courage and stout hearts of our soldiers. Before the war many of us, I might say, most of us, with our minds lingering over the glories of Waterloo, wondered how our men of the 20th Century would compare on the field of battle with their gallant ancestors.

The pessimists thought we were decadent and could never equal the performances of our grandfathers, the optimists dared to hope that we should prove almost as sturdy as they were, but who could have prophesied that our army of to-day would fight through a campaign that would contain at least a dozen Waterloos—and each far more frightful than the famous and gentlemanly battle of 1815—and that the heroism of the troops would immeasurably surpass all the records of previous wars.

One spends much of one's life making surmises and one is so seldom able to put any sort of opinion to the test, that we must be grateful to the Germans for this at least, that they have enabled the Army to prove to the nation that the valour of the British soldier is entirely unimpaired and he still ranks as ever as the finest soldier in Europe.

To attempt a comparison of national qualities is a dangerous task, but being brought into contact with other nationalities compels us to form some sort of estimate of each other's characters.

Before I venture, therefore, to sum up the outstanding qualities of the nations who are brought into contact through this war, I must explain that no one knows more thoroughly than I, the fact that however much we may try to draw up an average character for any nation we must realize that few, if any, individuals truly represent this type, but the type represents an average from which each individual diverges in a greater or less degree. Take for instance the typical character of John Bull, it is a true enough average of English character, but how often does one meet the real John Bull in ordinary life?

Let us start with the enemy and estimate the German character.

The German is stolid, boastful, and proud. He likes to drill or be drilled, to give orders or to take orders, and he knows nothing of that perpetual aspiration for liberty which we English have to excess. This leads in his wonderful army machine to entire lack of initiative. We try to train our soldiers to think and act for themselves. The Germans train their men, as we did 100 years ago, to surrender their entire minds to their leaders, that is, to become simply human machines.

The dominating trait of the German character during the last fifty years has been the insane desire to crush and rule the world. This is undoubtedly a form of sheer national insanity and must lead, as it always has in history, to the final destruction of the nation giving expression to it.

The motto of modern Germany is, "We are the supermen and all means are good that will enable us to impress our will on weaker races, (that is, the rest of world)". It is this idea that has caused the revolting cruelty of the German hosts in the present war.

The Russian is a strong and simple character. He is intensely religious, patriotic, and loyal, devoted to his God and his Czar. He is a brave soldier, but not at all thirsting, like the German, for war and blood shed. In spite of the dreadful tales we hear of Siberia, the individual Russian is the kindest and warmest hearted fellow in the world. He is patient, enduring, and a fatalist and his great asset in this war is that he is inspired with a long born hatred of the Germans.

The Frenchman—is vivacious and emotional, easily depressed or elated, full of contrasts and extremes. He will love you one minute and hate you the next with equal ardour. He has none of our English capacity for indifference or apathy and is always a violent partisan. Politics are food to him and one can hardly hope that he will ever find out what poisonous food they are. He is a good worker, a fine fighter and a brilliant engineer. The leading merits and defects of his character may be found in the history of our occupation of India and most of our Colonies. In nearly every case they were discovered and in the first place developed by the brilliant Frenchman. But the steady determined old Englishman followed closely behind and when he came, he came to stay and invariably succeeded in inheriting the volatile Frenchman's property.

The Englishman.—What shall we say about ourselves?

Certainly we may claim to be phlegmatic and imperturbable. We have no monopoly of honesty, but I think we are fairly credited with maintaining a high standard. Our greatest asset in the present War and one that goes far to inspire our allies is our undoubted tenacity. More than any other race in the world, we know what we want and will make the greatest sacrifices sooner than admit failure in any enterprise. It is the knowledge that this solid determination finally seals their fate, that makes that German cry, "Gott strafe England," and sing the famous "Hymn of Hate."

The English character is much admired, but the indivi-

dual Englishman is not much beloved, he is certainly less "loveable" than any other race in Europe.

During my seven months in France and in earlier years when living in foreign countries, I have come across numberless instances giving examples of all the traits I have enumerated for each nation.

And what heroes this war has produced! I will tell you of a simple case of quiet English heroism.

Before the war I had a friend in the Indian Civil Service—Mr. G. Gordon, who was then Deputy Commissioner of Jhelum. He had twice been the victim of bomb outrages in India and was a man marked down for assassination by the seditionists, in revenge for the very active part he had taken in tracking them down.

While I was at home in 1914, he also was sent home on sick leave with, as you may well imagine, nerves shattered. The moment war broke out he wrote imploring me to get him any sort of a job that would take him to the front—a peculiar request for a man with nerves shattered!

I replied that I was not likely to be able to help him and forgot all about him, for the time. A few months later in France on a dark night at some station where my train was held up, I ran up against a subaltern of the 12th Royal Lancers taking remounts to the front. With a beaming face my friend Gordon explained to me how he had at last got his heart's desire and was now on his way to join the 12th Lancers. I said good night to him and a month later read of his gallant death at the front.

The instances of wonderful traits in the French character would alone fill a book. I will give you one. At a small station I saw, in the early days of the war, some English wounded being taken out of a train. One man with his arm shattered was put down on the platform in his stretcher. A French lady who was standing amongst the crowd, rushed up to the stretcher, knelt by the side of the wounded man,

kissed his forehead and poured the contents of her purse into his lap !

In England we are taught to control and conceal our emotions, but we can surely admire such a beautiful display of emotion as the above.

The Entente Cordial has been a great success. In official relations everything has worked with wonderful smoothness, and the private relations between the officers and men of the two armies are very cordial, without being gushing.

Of course the entire British Army is talking French—of a sort. The British soldier who serves all round the globe is a great linguist in a small way and wherever he goes he manages to pick up a few indispensable words within a few days of his arrival. In India he has a fine vocabulary of imperatives including the infallible "Dekko" "Jao" "Bolo" and so on.

In Egypt, the young soldiers in 1885 were all talking Arabic a week after they had landed. It wasn't the best sort of Arabic, but it did all right and the natives were kind enough to understand it.

So in France today he is turning his attention to French and manages very well. Some have really quite a good knowledge of the language, others have merely a stock of useful substantives that they string together with English verbs, and they get the amiable Frenchman to understand as a rule.

The first word they learn (it is the catch word of the war), is "Souvenir". When the first troops arrived the kind people who welcomed them so heartily begged for a button or a badge as a "Souvenir". The result was that the entire British Army was soon buttonless and badgeless and corps had to be indicated on coats and caps with irdelible pencil which did not look very well. The most popular badge was the Royal Field Artillery one, because it was held to stand for initials of the three Allies, La Russie, La France, and Angleterre.

Well one can easily understand that the soldiers' mind soon came to regard the demand for a "Souvenir" as a

demand equivalent to, "Please give me something for nothing".

On one occasion I saw in the distance in some fields an old French peasant digging up potatoes, and a sturdy British soldier standing in front of him waving an empty bucket at him. I came up close unobserved and found the conversation consisted in very voluble French from the peasant explaining that times were hard and potatoes getting scarce, and on the Englishman's part of the one magic word "Souvenir", so obviously meaning "will you please give me a bucketful of potatoes to remember you by." The magic word prevailed in the end and the bucket was filled. "Well, well," said the Frenchman, "after all you've come here to keep the Boches out of my fields."

On another occasion a playful soldier removed a large codfish from a fish-stall, astounding Madame by offering no payment and just walking away hugging the fish and murmuring "Souvenir". This was of course very amusing, but a little hard on the shopkeeper and constituted a line of conduct not altogether to be recommended. But, as a matter of fact, the behaviour of our men has on the whole been excellent, and the large pay they receive in comparison with French soldiers who receive about a half penny a day, make them a veritable gold mine for the small grocers and restaurants. It would be interesting to calculate the amount of money England is pouring into France in the shape of petty expenditure by a million officers and men, big Government contracts for buildings, etc., huge rentals for hired premises (they don't let their allies off cheap—John Bull is rich and can well afford to be bled), and enormous railway bills for conveyance of troops and supplies.

I found the supply of "Souvenirs" to kindly French ladies was very embarrassing. One hates to refuse, and at the same time one looks so disreputable, bereft of all buttons and badges. I first of all thought of asking the men to supply the necessary buttons, but that seemed rather

unfair as they obviously wanted all they had got, to express their own gratitude. So I wrote home to my tailors and imported quantities of buttons of which I always kept a pocketful handy.

Talking with German prisoners, and our English wounded was a perpetual source of interest and pleasure. The German soldier was always cheery and ready to talk, especially if one could say one knew his part of Germany and I found them most anxious to impart all sorts of information if leading questions were not put. The German officer were as a rule sulky and uninteresting.

Our own wounded were truly marvellous. Their simple tales of their time at the front were lucid to a degree. It is certain that the feeling, mutual affection and admiration, that constitutes so strong a bond between the officers and men in our army, exists in no other. If I asked the men to tell me all about it, they mostly sang the praises of their officers. If I asked the officers, they dwelt only on the splendid heroism of their men.

Lastly I come to a dear old friend, the Indian follower. In one sense he is the curse of our army system in India. Overseas, as in China, and in the present war he detracts terribly from the general appearance of our Indian troops. Most of the fighting men being at the front, it is of course the Indian follower who is most "en evidence" on the lines of communication, and as he is often not a very presentable specimen, it is deplorable to see him being snapped by our allies as a "type of the Indian Army."

In the summer he is passable, but in winter he shrivels up and presents a most disreputable appearance. Large boots over thin ankles, spindle-shanks wrapped in putties, knees a little inclined to approach each other. On his body a fearful coat invented for him by a kindly Government—warm but ungainly to a degree—and his head! Two or three Balaclava caps concealing all of his features except just the cheekbones and two beady little eyes, and surmounted by a

very unsmart puggaree. What an apparition! And snapshots of this are handed round by admiring Frenchmen as, "Our brave Indian allies, the Sikhs."

But after all he is just what he is, and with all his woebegone appearance he is not seldom a hero. If you could ask a bhisti for instance of some 20 years service, you would find that he had accomplished on a minimum of pay, deeds that should entitle him to a place on the scroll of honour.

On the whole we may be immensely proud of the achievements both of the small army we sent across the Channel in the first instance, and the later magnificent performances of our Territorials and the New Army. The material of the new army is of the very best, and the very great difficulty of obtaining suitable officers has been to a great extent overcome.

We have shown Europe an example of an army of the highest efficiency, not only as a whole, but in each branch, we have demonstrated our superiority, except from the mechanical point of view, over the enemy. Cavalry, Artillery, Engineers, Infantry and Airmen have each established a moral superiority.

The work of the Medical Corps has been little short of marvellous and the numberless instances of splendid heroism, resource, and powers of organisation that occurred in the retreat from Mons, form a very glorious page in the annals of the Royal Army Medical Corps. Medical officers are armed, however, which I feel sure is a mistake, and has given at times an excuse, although an unfair one, to the Germans for disregarding the Red Cross badge.

The Army Supply Corps has received its meed of praise in the papers, it justly claims to have failed on no occasion since the first day of the war to deliver supplies up to time at the spot required.

The Ordnance Department, though rather more in the back ground—an army is inclined to think of its food

first,—has done work that would astonish those who will go into the facts and figures when those are made available at the end of the War. Not only the supply of ammunition, arms, and equipment, and repairs to armament, but the whole of the clothing supply has fallen to the share of this department on a scale never hitherto contemplated and for which no machinery existed at the time the war broke out.

Truly this has been a wonderful war. At the beginning we were quite well informed in all Intelligence matters. We knew the exact strength that each of the various nations would throw into the scale. We knew that Germany intended to advance by way of Belgium, and that her first blow would be struck with rapidity and with all her available force, but what has really been a surprise to us has been the bloodthirsty determination of the German host. Who for instance at the time of the battle of the Marne would have believed that 10 months later he would be reading of the fiercest German assaults in Ypres and Arras, coinciding with the throwing of fresh German reserves into the battle line in Galicia.

Let us be grateful that this has been our one surprise (if we except such things as the use of poisonous gas, which could not have been foreseen), while the poor Germans have suffered from enough to form the subject of another lecture.

To mention only one—it was a bad surprise for them to find that that "contemptible little army" could hold its own against five times its number, retire 150 miles hotly pursued, and then turn up smiling to help turn the tide at the battle of the Marne.

The cruellest surprise for Germany was the splendid bravery of Belgium and her heroic efforts which resulted in delaying the German wave of invasion until our own army and that of France were able to form some sort of a fighting line. How dearly Belgium has had to pay for this you all know and we must all remember that in the years to come whatever you do for a Belgian, and however unworthy a

being the particular Belgian may be, you cannot do enough for him. The words "I am a Belgian" should be a passport for him for all time throughout the civilized world.

Another painful surprise for the Germans has been the steadfast loyalty of India and the magnificent performances of the Indian soldiers at the front.

Amidst all the land-fighting that claims our attention day by day, let us not forget that the greatest lesson in strategy we learn from the war is the vital importance of "The Command of the Sea".

The Tactical lessons of the war are so far not very noticeable. We have chiefly learnt the excellence of our training manuals as they stood before the war—and for all this we must remember to thank our stalwart friends the Boers, for all they taught us in 1900-02.

New features are the necessity for an enormous preponderance of artillery, especially the heavier guns and high explosives, also the development which we are now attaining of a gigantic air service. The Nation however is learning many lessons, others than tactical, and surely it had much to learn.

The voice of Lord Roberts crying in the wilderness, unheeded for so many years, has now reached the ears of the nation after that heroic figure has passed from among us. Some system of Universal Liability for Service (not conscription), is certain to be shortly adopted, and let us not judge the price we have paid in the blood of our best and bravest to convince an unwilling nation that Freedom is only compatible with certain moral obligations, and that Freedom can only be attained and secured by perpetual readiness for War.

I should like to quote here some verses by Owen Seaman in "Punch" of June 2nd 1915.

LIBERTY—THE FALSE AND THE TRUE.

So when the sudden Warbolt fell,
We still kept up our games and strikes,

True to the Law we loved so well,
Let every one do as he likes.
This was a free land, none should tramp
In conscript lines, dragooned and herded,
Though some might take a call to camp
If the request were nicely worded.
And now we learn, at what a price,
And in an hour how dark and late,
That never save by sacrifice
Men come to Liberty's estate.
No birthright helps us here at need
Each must be taught by stern probation
That they alone are free indeed
Who bind themselves to serve the nation.

With all that all of us have lost and suffered, can we look on the war so far as it has gone with feelings other than those of thankfulness and pride? We have come through with clean hands, we have stood for Chivalry and Humanity.

We have to our score no records of Goeben and Breslau, no Falabas or Lusitanias, no ruined Belgium, or other dishonourable violations of a pledged bond. At no period of our nation's history have we had as great cause for a just and wholesome pride in our nationality. The words of thanksgiving rise from my heart to my lips "Thank God I am an Englishman." Do any of our enemies from the other side of the Rhine say today, or will they say in years to come, "Thank God I am a German"?

MAOHINE-GUNS.

BY

Lt.-Col. J. C. DE K. BRUCE-KINGSMILL, R. F. A.

The British Army now appears to be composed of five distinct arms :

1. Cavalry.
2. Artillery.
3. Infantry.
4. Machine-Guns.
5. Aircraft.

While endeavouring to deal with machine-guns considered as a separate arm, we will hope to co-ordinate this arm with the others, showing at the same time that the five arms in co-operation is everything. Exact details we cannot touch upon here. The staff know best how to deal with each separate problem as it arises. We will try therefore to deal with general principles and those as we see them. Our point of view may in many places be wrong, or at least open to adverse or even destructive criticism, but in the present phase of machine gun development there must be numerous points which are still debatable.

Any statement of ours therefore that appears to be dogmatic, we will ask those experts present to consider only in the light of questions asked, which their superior knowledge and experience will readily answer.

Thus we shall get real good out of this lecture by getting established, here and now, a firm scientific basis upon which we can go to work—some to make machine-guns and some to use them.

We will therefore at the outset ask this question. "To cope successfully with the present state of war, should we not have at least one machine-gun per twelve fighting men?"

In our endeavour to prove this position, we must necessarily touch in general terms upon the tactics of machine-guns, so that we may be reminded of the many urgent duties which the machine-gun is called upon to perform in war. To enumerate the separate duties of every servant in a great department, would be of seemingly little use, *if we have not the servants*. Yet this enumeration might help to show, how necessary the servants are, if the department is to be maintained.

Machine-guns are our faithful confidential servants, and they will, if we engaged them for life-service, carry us through this present crisis in our history with a *greater economy of precious lives, of money and of material—and with enhanced glory, dominion, and power, to our King and Country.*

Major Applin in his striking book, "*Machine-gun Tactics*," tells us that one machine-gun is equivalent to the fire of fifty rifles. But if this is so, or if the proportion is greater, taking into account the possibility that all riflemen may not be perfectly trained, then we have to ask—how many machine-guns have we at the present juncture? We believe that only two machine-guns per cavalry regiment, none per battery and two per battalion is our war allowance, and *are there any Indian infantry regiments of the field army without any machine-guns whatever?* If so, then what of the rest?

But while, in common with other soldiers, we deeply deplore the long handicap which Germany and Austria have given themselves by their wise banking of machine-guns in times of peace, yet the country should, we think, realise that the Army is in no wise to blame in this matter.

A study of the Proceedings of the Small Arms Committee since 1904, will show us how this Committee has laboured for and recommended the carrying out of certain principles regarding machine-guns.

Take one extract. "The general and obvious conditions

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to be fulfilled by a machine-gun are—

- (a) Reliability.
- (b) Simplicity.
- (c) Lightness.

The Germans must have got wind of the work of our Small Arms Committee, because we find them somewhat later enunciating the same principles. *But they could get sufficient money to carry out these principles—we never could.*

In Germany the army and navy come first, the church second, and the rest—later on. *So then—a nod from the Kaiser—and there are the machine-guns.*

So that although our War Office took up machine-guns about 1889, *the same spirit that fought Lord Roberts closed the national purse-strings.* And so, the wealthiest nation in the world has had to submit to being mown down by German machine-guns, a quarter of a century after the greatest machine-gunner had settled in our land. *And this is British history—the financier lives, while the soldier dies.* “Maintenant, les anglais ont change tout ça—*mais un peu tard,*” we can hear our allies saying; and the German still sings, “*Deutschland über alles*”—while he makes more—and still more—machine-guns!!!

When we consider how much per day our present war bill amounts to, it is easy enough to calculate, how many days expenditure would have given us a preponderating supremacy in machine-platoons over our enemies, at the outset, and have thus surely saved many *precious lives, many of the flower of our first splendidly trained army—even many whom those here have known and loved.* Still the present is the moment we have to live in, and there is not a second to be lost. It has been said that, “Men must work and women must weep,”—but now we say “*Men must work and women must work—for machine-guns.*”

An excellent article in the July number of the Journal of this Institution is worth general reading and study. But the author does not, I think, ask for *enough guns.* The

officers in high places he so forcibly appeals to, *cannot* make machine-guns without money ; but they *can* make them with money—and in India too, we feel *sure*.

I will, therefore, divide our subject into two main parts.

(I). The *description, organisation, and general tactical principles, of the machine-guns.*

(II). Our experiences in the present war, and what we find our enemies are doing.

The *second* part will deal broadly,

(1). With various suggestions, regarding the many duties of the machine-gun, as the faithful and reliable servants of all—whether it be,

- (a) *Horse-artillery*
- (b) *Cavalry*
- (c) *Artillery*
- (d) *Infantry*
- (e) *Aircraft*

so that we may see, why, all, these great arms of war must, *under the guidance of our staff*, be inseparably welded together by many machine-guns, into a great, harmonious co-operation.

(2). With a few notes on *possible* machine-gun manufacture, IN INDIA.

(3). Finance and conclusion.

(I) *Description or Organisation.*

The modern machine-gun is an automatic weapon almost automatically laid. It is capable of firing from 100 to 600 shots a minute from a light mounting of extreme mobility, and should fulfil many qualifications:

1. It should be able to deliver about 400 shots a minute without loss of accuracy, even with prolonged "continuous firing."

2. It should be capable of accompanying cavalry, artillery and infantry wherever these arms can go; it should occupy the smallest space, and be able to come into action quickly at rifle range.

Machine-Guns.

3. It should have a firm mounting, upon which the gun is steady, and from which it can be aimed rapidly and fired while kneeling, sitting, or lying.

4. The gun and its mounting must present a small target, and be light enough for each, and if possible, both, to be carried by one man for a considerable distance, and should admit of being dragged by a man crawling or crouching for short distances.

5. It should be in constant readiness for action, and able from "pack" to open fire in less than thirty seconds.

6. It should be simple, strong, and durable. Mobility and constant readiness for action are indispensable with cavalry, while lightness and smallness of target are essential factors.

There are eight main types of machine-guns at present in use in the armies of the world, viz.:—

<i>Gun</i>	<i>In use in</i>
Vickers	... Great Britain.
Maxim	... Great Britain, Germany, Russia, Italy, Portugal, Turkey, Switzerland, and U. S. A.
Hotchkiss	... France, Japan, Belgium, Norway, Sweden, Spain, and Portugal.
Perino	... Italy.
Puteaux	... France.
Schwarzlose	... Austria.
Skoda	... Japan and China.
Madsen	... Russia, Denmark (Rekyl pattern), and China (for cavalry).
Colt	... By several countries in addition to adopted gun.

The principal differences between these guns are: (a) The automatic mechanism. (b) Method of loading.

(a) may be divided into two classes: 1. *Recoil action*, the Maxim, Perino, and the Madsen. 2. *Gas-pressure action*, the Schwarzlose, Hotchkiss, Skoda, and Colt.

(b) consists of three classes: 1. *Belt loaders*. Maxim, Schwarzlose, and Colt. 2. *Metal clip loaders*. Hotchkiss, Madsen, Perino, and Puteaux. 3. *Hopper loaders*. The Skoda.

The Rexer gun has been purposely omitted; it only weighs $17\frac{1}{2}$ lbs., but is fired from the shoulder, and is therefore more of the nature of an automatic-rifle than a machine-gun. It would take too long to deal with each of these weapons separately, therefore the Vickers has been selected as the type with which to discuss the question of tactics.

The extreme range of this type of gun is for all practical purposes the same as the infantry rifle—about 3,500 yards, though it is more effective at the longer ranges than an equal volume of rifle fire, owing to the ease with which the firer can elevate and aim the gun on its mountings and the stability of this mounting, which causes it to have a beaten zone of only half the depth and nearly half the width of that of infantry firing the same number of rounds.

On the other hand, "rapid" fire can only be used by the machine gunner on special occasions, so that it will be necessary to compare "slow" infantry fire with "deliberate" fire from the machine-gun, in order to arrive at the mean fire volume of each. Seventy shots a minute can easily be fired "deliberately" from a machine-gun, and this could be increased to 120 by highly trained gunners, but, taking the lower figure, deliberate fire equals in volume the fire of twenty-four men using rifles. But it must always be remembered that the object of the fire fight is to bring a concentrated and overwhelming fire to bear *at the right moment* on certain positions of the enemy, and when the moment arrives machine-guns can and will use the most rapid rate of fire possible, which will be from 250 to 300 rounds a minute, or equal to that of 50 or 100 riflemen. Mere volume of fire, however, is useless without control, accuracy, and concentration, and it is here that the machine-gun is so vastly superior to the rifle; for amongst 50 men using their rifles there can only be a small percentage of good shots,

while even among the good shots, unforeseen factors, such as fatigue, bad fire positions, excitement, wrong sighting, failure to see the target, etc., cause a large percentage of the shots to go astray, and make it very difficult to concentrate the fire on any particular position of the enemy.

The result of two well known experiments show that both in accuracy and rapidity a machine-gun is much superior to 42 picked shots, whether firing the same number of rounds at known ranges or firing an unlimited number of shots in a given time at an unknown range. We shall not be wrong then, if we say that a machine-gun is at least equal to 50 rifles in fire value.

The Germans consider its fire value equal to 120 rifles. Our *Infantry Training*, 1914, gives the volume of fire from a machine-gun as equal to that of about 30 men firing rapidly; but the advantages in the way of control, accuracy, and concentration (see page 29) must be taken as rendering its fire value equal to that of a much larger number of men.

The mobility of the infantry soldier is limited to the rate at which he can march, which on the battlefield is about 100 yards a minute, or less than three and a half miles an hour. Doubling may be left out of the question, as it quickly reduces fire efficiency to a minimum.

The mobility of the machine gun will depend almost entirely on the way it is carried. We recommend pack transport in all cases with cobs or ponies. The cavalry cob must be as fast as any horse in the squadron. The artillery and infantry cob heavier and heaviest.

It is a *sine qua non* that a machine-gun must be at least as mobile as horse artillery. There is no reason why it should not be as mobile as cavalry, and the choice remains between a pack-horse with a mounted detachment or a galloping carriage; and the former is in every way preferable, principally because it can carry the gun and ammunition across any country, and can come into action in less than 30 seconds on an adjustable tripod, which can be carried by

hand into any position and presents a very small, inconspicuous target.

The majority of foreign countries have adopted pack transport for their machine-guns. It is desireable with infantry and absolutely essential with cavalry and artillery.

The Swiss and the Americans have permanently adopted pack transport for the machine-guns with their cavalry, which are able to accompany them over any country without detriment to either horses or guns; and in the American Army the average time for a well-trained cavalry machine-gun detachment to go into action front, from mounted formation, unpack, and set up the guns, load, aim, and open fire, is 25 seconds; while at the departmental meeting for 1908 the machine-guns of the 10th Cavalry, from the halt in line, *moved forward in section column at a gallop for 200 yards and went into action and fired a blank shot in 31 seconds.**

Infantry will never again fight in two ranks in civilised warfare, and the closest formation possible for a firing line is one pace per man; 50 men will therefore occupy a front of roughly, 50 yards; in other words, the target presented to the enemy, is 50 yards in breadth, and, provided the elevation is correct, shots striking anywhere within this 50 yards will be effective. The machine-gun, however, only occupies a front of from 4 ft. to 5 ft. 2 in., or one-twenty fifth *the front offered by infantry having equal fire effect.* It is on this point that the wonderful tactical possibilities of the machine-gun rests: *the maximum of rifle fire from the minimum of front.*

We are now in a position to form an accurate estimate of the potentialities of the machine-gun and its true tactical value as compared with infantry, and we find:

1. Its fire effect is equal to that of 50 rifles at least.
2. Its mobility is the same as that of Cavalry.
3. Its visibility is that of a file (2 men).
4. Its vulnerability is unaffected by 50% of loss.

*Journal of U. S. A. Cavalry Association, July 1909.

The best and nothing but the best is necessary to the successful employment of machine guns, and the importance of obtaining the very best officers as section commanders is so great that there is reason to doubt the utility of having machine-guns at all if they are not commanded and handled by experts.

The mechanism of the Maxim is somewhat complicated and delicate, and depends for its proper working upon the exact adjustment of each part; but no more so than any other piece of modern machinery. It is far less complicated and certainly far less delicate than the modern motor-car. Indeed, the comparison is analogous in several respects, as both require highly trained operators to ensure their smooth and continuous working, and each individual machine, whether gun or motor, has its own peculiarities and requires special study to obtain the best results.

As the gun is generally required to move and come into action independently of other troops, it must find its own scouts, who not only have to safeguard it from surprise when moving, but must be trained to select good positions whence it can come into action.

With the tripod mountings and pack transport the best *working* strength for a machine-gun section will be found to be the following:—

1 officer, 1 sergeant, 2 corporals, and 24 privates, that is, 1 N. C. O and 12 men to each gun. 8 men for the infantry is far to few, the scouting must suffer.

A modern machine gun in the hands of experts should never jam, while failure of automatic fire will be rare and momentary. Until this standard has been reached a machine-gun detachment cannot be considered fit to begin tactical training.

Captain Matsuda writes: "Whereas at the battle of Pensi-hen on October 12th 1904 we had some trouble after firing 1,800 rounds, on March 3rd 1905 the guns of one section after firing 11,000 rounds continued to work perfect-

ly. *The gunners were absolutely familiar with their weapons.*" Lieut.-General Sir C. J. Burnett, K. C. B., remarked: "Like a good chauffeur, the Japanese machine gunner knows all the peculiarities of the weapon he fires and can tell almost by instinct when anything is going wrong."

No drill for a machine-gun battery appears to have been finally authorised yet, but the simple formations of a troop as laid down in *Cavalry Training* will be found admirably suited for a battery of machine-guns on pack-horses with mounted detachment.

The Germans, who have studied the question of machine-guns with a thoroughness far greater than that of any other nation, have made them a separate arm of their service, under trained and permanent gunners, and they evidently consider that only specialists can attain the necessary efficiency.

Infantry.—It is rapid fire delivered in sudden powerful bursts, with intervals of complete silence, which characterises the fighting of British infantry, the unit which delivers the burst being usually the section of 12 to 14 rifles or the platoon of 50 to 55 rifles.

It is safe to say that our rapid fire when it displayed its powers for the first time at Mons, astonished Europe as thoroughly as Frederick the Great's volleys astonished the Europe of 1740, or Wellington's the Europe of Napoleon. Fire assists movement. The French and ourselves seek by means of manoeuvre and fire combined to advance as near the hostile position as possible, using momentary bursts of intense fire to facilitate the approach to bayonet-charge distance.

Now the machine-gun is the machine platoon, and no more infantry appear to be necessary for the taking of a position than those who work the machine-guns and those who creep up to clear with the bayonet what of the enemy is left by these machine-platoons. *Thus it is that an increase in machine-guns must mean a greater economy of infantry in the field and thus a greater diminution of casualties.*

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Now to us at this supreme moment in our history an ever greater economy of trained men is necessary and thus comes about our contention that an unlimited manufacture and supply of machine-guns is vital to our co-maintenance of this just war unto a great, glorious and ultimate victory.

Although at the outside we suggested a possible future of one machine-gun to every twelve fighting men in the field yet it is obvious that we cannot reach that ideal for some little time to come, even if the principle thereof were accepted to-day. In the meantime however it seems to be urgently necessary that we should have and have at once:—(all batteries being each of four guns)

- (a) a section of two machine-guns to every squadron of cavalry and to every (double) company of infantry with two sections per regiment and battalion spare. These machine-guns should never be taken away in the field from the units to which they are attached. They would of course belong to the Corps of machine-gunners, should such be formed, and would wear their own distinctive uniform or badge.
- (b) Three or four batteries to every cavalry and infantry brigade, in addition to the "regimental" machine guns mentioned in (a). These might be called "brigade" machine-guns.
- (c) Six or eight batteries of machine-guns to every Cavalry division to be known as "Cavalry divisional" machine-guns.
- (d) Twelve or fourteen batteries to every composite division to be known possibly as divisional machine-guns.

In this way squadrons, companies, and regiments will always have their own machine-guns with them whatever they may be doing.

In like manner the brigade and divisional commanders

will always have their reserve of machine-guns in their own hands, as a powerful reserve of fire to support any portion of their command at critical moments of the fight.

But we propose to go a step further. We would also attach a proportion of the Corps of Machine gunners to the Artillery. This is a delicate step, but we think it is justifiable. It is really an appreciation of the magnificent work which artillery has done in the past and is now doing before our eyes—on the many battlefields of France, Gallipoli, Mesopotamia. Should time allow I will endeavour to suggest some reasons for this proposal. But they are debatable, and may be put aside by those who know better than I. One thing however is certain—that if it costs $2\frac{1}{2}$ lakhs per annum to maintain an 18 pounder battery in India, that battery must be protected from all comers, not only by its own guns, but by all arms at our disposal—and at all times.

A large reserve of machine-guns is necessary in addition to those previously mentioned. Barrels and bodies have to be replaced at a short notice like any other weapon which is worn down. Guns may fall overboard, may be captured, may be blown up by artillery—and so on. But no machine-gun can stand, once, *it is located* by artillery. If the machine-gun is the torpedo boat, artillery is the destroyer.

What the enemy is doing.

The following points are reported regarding the newest German machine-guns.

There are three types:—

- (a) *Model*—weighing 21 lbs.
- (b) *Experimental*—weighing 23 lbs, air cooled.
- (c) *Service*—weighing 25 lbs, water cooled.

Fire from shoulder. Three men appear to carry the gun ammunition and fittings into action.

One carries the gun stand and spare parts, the other men carry 500 rounds of ammunition each. The gun-carrier is loaded like a sandwich man. He has his gun and kodak tripod hung in front and his box of spare parts to balance them behind.

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The water-cooled gun fires 700 rounds per minute and boils one gallon of water in $1\frac{1}{2}$ minutes. If air cooled it can only fire 400 rounds per minute. Thus the water-cooled gun evaporates 110 lbs of water per square foot per hour at its highest rate of firing. The best high-pressure boiler now in existence (such as the Thorneycroft or Niclausse) only evaporates 14 to 16 lbs. per square foot per hour. But an ordinary marine boiler only evaporates 10 to 12 lbs. per square-foot per hour. Thus this machine-gun evaporates about 8 times as much as the highest class high-pressure boiler in existence.

The German gun carries about 20% more ammunition than we do, even with our new belt of 250 rounds. Its maximum range is 2,500 yards. It can be tapped to a spread of 14 and fired off a man's chest. The Germans have 12 of these guns per battalion against our 2 per battalion.

They go in much for night-firing by clinometer-sweeping the roads up to a range of 2,500 yards up which our transport is expected to be moving. We have not enough guns at the front to do this. But this German gun drinks up so much ammunition that in two minutes it is dry.

German cavalry are using these guns in profusion. A few files can gallop up, and without dismounting, blaze away at us from the chest, or they can halt, unpack and fire in about 25 seconds.

Every man in a German machine-gun company is an expert in the gun. Each gun is considered to be worth 50 men or more. Their fire is considered to be the most valuable form of discharging bullets, and an enormous amount of time, trouble and ammunition has been spent on training to this end. The following is a brief summary of some important notes which have reached us from the various fronts. A few comments have been added.

Machine-guns. Machine-guns have played a very important part in the war, and the German is adept in making use of their *surprise* effect, which has been found to be very

great indeed. Till they are located and engaged machine-guns play havoc with troops in close order, but when located they are easily *knocked out by artillery fire*, or silenced by a *concentrated rifle fire*. Great care should therefore be taken in selecting the positions for machine-guns, in occupying them without attracting attention and in reserving fire till a suitable opportunity arrives, in order to make full use of their surprise effect. The only way to avoid the surprise effect of the enemy's machine guns is by careful reconnaissance.

The German method of advance is to show a front with cavalry, in close contact with which is a highly mobile force of Jaegers conveyed in motor lorries and accompanied by machine guns. When attacked, the cavalry calls up the Jaegers who deploy behind the cavalry screen. The cavalry then withdraws, and the allied cavalry finds itself confronted by an infantry force with machine-guns.

The German gun as it rests on the ground is about the height of a man in the firing position lying down. When raised it is about the height of a man kneeling. A spectator saw 50 of these guns loaded into small two-wheeled carts and into motor trucks, which are mentioned later; the operation of loading took less than 35 minutes. As they passed through a town no one would have detected from any evidence that any machine guns had been taken through the streets. The machine gun is sometimes carried in the manner of an African hammock on the shoulders of bearers. They move it also carrying it as they would a stretcher with a blanket thrown over the gun and a couple of knapsacks or perhaps an ammunition box; when carried in this manner the gunners at a distance are easily mistaken for stretcher-bearers carrying a wounded man off the field.

They also have a two-wheeled cart which is fitted to transport three of these guns. They have two men to every gun. The driver and another man ride on the seat, and each cart is accompanied by a mounted non-commissioned officer or perhaps subaltern.

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The members of this mobile machine-gun force march light, their knapsacks, blankets, and in some cases their rifles, being carried in the carts. The mounted men that accompany them have a rope and leather harness, so that the horse can be used as the leader of a tandem in case of heavy going. The cart has strong and steady springs. The appearance of the cart with its load of, in some cases, bundles of forage, knapsacks, haversacks and blankets, would attract not the slightest attention. The guns at the bottom were absolutely hidden. The cart is somewhat like an English butcher's cart, only much heavier. The tail-board drops down in the ordinary way.

In regard to the *motor vans*, they carry *nine guns*. The vans have evidently a shallow false bottom. This is very carefully concealed, so carefully indeed, that it is said that some of these lorries have been captured and *lost* without the guns having been discovered by the captors. A small tail-board, which drops down, facilitates the guns being hauled out or replaced. A heavy load is placed on top of the false bottom. The sides of these motor vans are quite high, and in many cases machine-gun detachments of no less than 15 or 16 men were carried on a van.

The use and mobility of machine-guns carried in this manner is, of course, apparent. They are always up with the regiment, and can be taken over any ground without difficulty to support an advance or cover a retreat. Moreover, if necessary, they can be concealed from falling into the hands of an enemy by digging a shallow grave, wrapping the gun, etc., in a blanket, and covering the whole with a few shovelfuls of earth. Machine-guns have actually been found buried in this manner. It is understood that the wooden cross marking their sites had a slight distinguishing mark.

The German machine-guns are used in the attack with boldness and cleverness; they are pushed up close to the hostile trenches, and in this manner sometimes prepare the way for the infantry attack. They are often used in con-

junction with snipers, or in large numbers against one or both flanks of the portion of the position which it is intended to attack. They usually cross their fire, which makes them difficult to locate from the portion of the trenches opposite them. One attack was carried out *solely by machine guns*. The trench was engaged from a flank by six or seven guns, while *other* machine guns succeeded in working round and enfilading the position.

The exact range is usually obtained by opening bursts of fire as soon as a suitable fire position has been occupied, after which the Germans satisfy themselves by preventing the defenders, as far as possible, from showing above the parapet, thus enabling their own troops to approach in security. The closer they can approach a trench, the more oblique becomes their fire. The duration and volume of the fire depend on the ground over which the advance of their own infantry has to be made, but they are careful to husband their ammunition, as the ammunition supply is the chief difficulty with these guns.

When the advance of their own infantry has passed the machine-guns, the Germans try to place the latter in positions whence they can assail the enemy as he retires from his trenches, or, alternatively, in the event of a counter-attack to open fire in such a way as to allow their own infantry to withdraw.

When we consider the historic landing in the Gallipoli Peninsula we are reminded that the beach was apparently deserted. Suddenly from nowhere, came a raking fire of machine-guns which wiped our people out. *A machine-gun can be hidden where nothing else can.* Then in East Africa, we all know the use which the Germans made of machine-guns.

Horse and Field Artillery.

There is one important duty which machine-guns are able to perform better than any other arm, and that is escorting artillery, but more especially horse-artillery. A

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section of machine-guns might be allotted to each battery of artillery when an escort is necessary. They could march in the rear of the battery when on a road, and on the outer flank when in open country and away from cavalry. The sole object of the machine-guns is to afford protection to the battery from cavalry, and to prevent rifle fire from being brought to bear on them from effective range. Therefore the section commander must devote his whole attention to this object, and he is not justified in opening fire on any target that does not directly threaten the battery—this especially applies to horse artillery in that stage of the mounted combat immediately before the collision, when the guns are firing on the opposing squadrons.

The section commander will be under the immediate orders of the battery commander, and should be acquainted with his plans and intentions. He should remain with him until the position for action has been selected, when he will immediately seek the best position from which to cover the guns, taking particular care not to mask or limit their radius of fire nor hinder their line of advance or retreat. Machine-guns have nothing to fear from cavalry under any circumstances, and when in a selected position with ranges accurately known, a single gun properly handled could easily stop a squadron.

Artillery as it fights at present does not always need an escort. But if ordered to take up a position on an exposed flank, it does. Is an escort always available when artillery wants it? True that infantry will always give artillery what they can? *They always play up.* But they cannot often spare much on sudden demand—say a couple of platoons or so—say 100 rifles. Let us place these 100 men on the exposed flank of a battery and imagine a cavalry rush just beginning say at from 800-1000 yards. The cavalry will be opened out, the second rank about 100 yards behind. Supports will follow up at selected points, but no closer than 300 yards.

Normally the second rank receive no shock. Their

function is to fill up the shrapnel holes in the front rank and to sabre. But they cannot charge home against machine gun fire. If our infantry are to resist a cavalry rush they must be in the narrow front of two ranks. One rank is no good. But cavalry do not love a face-to-face attack. They have reconnoitred, and they will take our infantry escort on flank if possible, if not, never mind. Infantry fire cannot be made rapid enough to stop cavalry. 15 aimed shots per man per minute will not stop cavalry, racing on from 800 yards. Horses and men will fall, but their places are rapidly filled—and on the cavalry comes. But then there is the bayonet? Cavalry will never be stopped by the bayonet. The pace they can go at must smash up infantry. No physical object can stop cavalry except a burst of machine-gun fire. Hence, is not the machine-gun a better escort for artillery than infantry?

But if imagination takes us a bit forward in our fighting history and if artillery then often fights in smaller or section units, covering a target with bursts of fire from well hidden cover; and if, when its range is found, it moves sharply away to one of its several alternative positions, then even more than to-day, the machine-gun must surely be its protective escort?

Cavalry Training—1912 reads (on page 229). “The extended formations adopted by the infantry, and the exhaustion entailed by the continued strain of battle combine to render artillery and infantry, peculiarly susceptible to sudden and unforeseen attacks by mounted men.” Again (on page 282) we read: The attack against artillery should be made on one or both flanks of the line of guns in extended order. A portion of the attacking force should be detailed to attack the gunners when the guns have been ridden through. Other portions should be detailed to deal with the escort, limbers and horses. The limbers and horses are very important and should be seized as soon as possible.” No mention is made here of the cavalry machine-

guns. But as the cavalry must *first* be armed with our new increase in machine-guns, the gunners will have a new foe to contend with—a foe who is always fresh. And so all cavalry-attack on artillery will thus be stiffened with a hot machine-gun fire—our artillery must have their *quid pro quo* in a sufficiency of machine-guns which are always available to meet the worst. This is another argument in favour of each battery of artillery having attached to it a section of the corps of machine-gunners in addition to possible reserves under the immediate hand of the artillery Lieut. Colonel and of the C. R. A.

Now there comes a moment in the fight when protective artillery fire must cease. And this moment might well come earlier than at present. When friend cannot be distinguished from foe and the errors of the gun and fuze make it *doubtful* if firing can be continued over the heads of our infantry; then the artillery machine-guns on the word of the Commander Royal Artillery can gallop forward and act as mountain artillery are now doing in France only without being ordered to retire from the captured position. Then in co-operation with the infantry machine-guns, these machine-guns of the artillery may form a wall of protection against all possible counter-attack.

Machine Gun with Aircraft.

The following seem to be the most important duties of aeroplanes in war—

- (1) Reconnaissance.
- (2) Destruction of hostile aircraft, both airships and aeroplanes.
- (3) Attack of troops on the ground.
- (4) Destruction of material, such as airship sheds, oil tanks, magazines, etc.

The first and fourth headings are outside the scope of this paper.

The second and third necessitate the maintenance of a fleet of machine-gun carrying armoured aeroplanes. At least

one machine-gun per aeroplane might be carried by this fleet. But as the carrying power of aeroplanes develops as it is fast doing at the present time, two machine-guns even more may not be unusual. The reliable engine having almost come, nightflying will be much resorted to; and for night-flying the machine-gun is invaluable, as it protects the aeroplane during a forced landing on unknown ground.

Even before the war broke out, it was proved possible to fire a rifle, a machine-gun, and even a one-pounder gun from an aeroplane with fair accuracy. This principle is now fully established, so that a purely reconnaissance aeroplane might be accompanied by a fighting aeroplane, so that temporary local command of the air over the locality to be reconnoitred, is secured. Armed and armoured aeroplanes may have to attack one another on a lower level than the purely reconnaissance aeroplane, because the additional weight they carry entails both loss of speed and climbing power.

In the attack of airships, the average aeroplane is faster than the average airship. The aeroplane can fly faster, climb higher, and is easier to manoeuvre than the airship, while the airship can climb faster, and provides a steadier platform for a heavier armament than the aeroplane.

Airships may try to keep aeroplanes at a distance by virtue of their possible power of delivering a more accurate fire, while aeroplanes will endeavour to *close*, in order to make use of their manoeuvring power and to obviate any comparative inaccuracy of their fire. It may be necessary to employ several armoured machine-gun aeroplanes for the attack of one armed airship—one or two to destroy the personnel and stop its fire, while the others destroy the envelop, exploding its gas; but even one machine-gun aeroplane should under favourable circumstances explode the gas of an airship by its gush of fire—and that at some distance.

Then there is the desperate work of a fast aeroplane (even unarmed) catching and ramming, or driving through the airship. The combat between two aeroplanes is more

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difficult. Each will manoeuvre so as to prevent his opponent using his machine-gun to the best advantage. If one aeroplane tries to avoid the other, speed will be the determining factor; but the pilot who decides to flee, will present the best possible target to the pursuer.

The personnel of anti-aircraft guns can be well attacked by machine-gun aeroplanes, leaving the bomb-carrying aeroplanes of the squadron to deal with any hangars, magazines oil tanks etc. they may be protecting. Anti-aircraft guns on land should therefore have at hand their own machine-gun escort to protect them; and thus we see that the work of this class of gun also, could be increased by the help of the machine-gunner.

Machine-gun aeroplanes are invaluable in completing the demoralization of a beaten army. Co-operating with the pursuing horse-artillery and cavalry (with its numerous machine-guns) the reformation of a beaten army should be well-nigh impossible. Machine-gun aeroplanes could fly on the van of the beaten army—and wheeling round, catch it on its only free side, co-operating of course with many flanking aeroplanes. Under such circumstances, *vae victis!* indeed.

We have tried a Rivers Vickers gun with aeroplanes. This gun is air-cooled and weighs about 27 lbs. Our water-cooled gun seems ill-adapted to the air-fight, as after firing about 2000 rounds the steam-haze obscures the foresight.

Other things being equal, the gun-carrying power of aircraft seems closely linked up with its engine-power. But if engine-power is large, weight may be seriously increased. The weight of our aircraft-engines appears to run from $3\frac{1}{2}$ lbs. per horse-power to under 1 lb. per horse-power.

It is recently reported that when reconnoitring over P. at a height of about 4000 feet, two officers R. F. C. engaged a large German-biplane having a double fuselage, two engines and a pair of propellers. The German machine was armed with a machine-gun. Our officers drove him out of the fight.

On July the 19th Mr Tennant is stated to have informed the House of Commons that there was no evidence that the new German multi-engined aeroplanes carried guns larger than machine-guns. If this is so, then the Germans have adopted our views.

Notes on the possible Manufacture of Machine-guns in India.

Mr. W. E. Hackney in a paper read before the Institution of Civil Engineers in 1911 tells us
Crucible Steel. that fusion in crucibles is the simplest and oldest form of making steel, and has been practised by the Hindoos from a very remote period. In the Hindoo process a small quantity of wrought iron, from $\frac{1}{2}$ to 2 lbs. either in one lump or cut to pieces, is put into a crucible of unbaked clay, together with one-tenth of its weight of dried mould, the whole being covered with one or two green leaves and luted over. From 14 to 24 of these small crucibles are stacked together when the luting is dry in the form of a dome or beehive, an opening being arranged by withdrawing one crucible from the lowest row, to form a firing hole. Fire is lighted inside the dome of crucibles, and the inside space is filled with charcoal, which is also heaped over the top. The fire is urged by bellows, the blast being introduced into the fireplace by a clay pipe and in from $2\frac{1}{2}$ to 4 hours the operation is completed. The resulting steel is called "*wootz*." It is reheated, cooled down and drawn out at a very low red heat.

Mr. Henry tells us that a forged bar of "*wootz*" which he analysed contained:—

Combined Carbon	...	...	1·333%
Un-combined ,,	...	...	0·312%
<hr/>			
TOTAL	...	...	1·645%

or nearly the maximum quantity that is found in any metal that can be classed as steel.

AUGUST 21ST.—Counter attack by a Turkish division repulsed in the Gallipoli Peninsula. British advance and capture of ground of "great tactical value".

AUGUST 22ND.—Declaration of war with Turkey by Italy.

AUGUST 23RD.—German destroyers sunk by 2 French destroyers off Ostend.

AUGUST 24TH.—Casualties of Prussians alone amount to 1,740,836 killed, wounded and missing, not counting 645 casualty lists of other parts of the German Empire.

AUGUST 25TH.—Successful raids by Allied air-craft on German camp in France.

AUGUST 26TH.—Renewal of German advance in the district of Vladimir Voluski in Western Russia, Russian evacuation of Brest-Litovski.

AUGUST 27TH.—German submarine destroyed off Ostend by a British aviator, French air raid on Malheim in Baden.

AUGUST 28TH.—Allied air-raid on German aviation sheds at Ghent. Commencement of incessant bombardment of German front in the west.

AUGUST 29TH.—Renewal of Austro-German advance in Eastern Galicia. Repulse of trans-frontier tribesmen near Chakdata in the Swat Valley.

AUGUST 30TH.—Russian success on R. Strypa in Galicia. Capture by the British of an important tactical feature in the north-west of the Gallipoli Peninsula.

SEPTEMBER 1ST.—General Ruski appointed C. in C. of Russian troops in northern region, General Yanishkevich appointed Assistant Viceroy of the Caucasus.

SEPTEMBER 2ND.—German Ambassador to the U. S. A. promised that Indians should not be surprised without warning, provided Indians did not resist or attempt to escape. Russians evacuated Grodno. Hard fighting on the R. Dvina.

SEPTEMBER 3RD.—Russians retired to right bank of R. Dvina at Fredericksburg.

SEPTEMBER 4TH.—Allen Lutet Hespeian torpedoed without warning near south coast of Ireland, 25 casualties.

SEPTEMBER 5TH.—Complete defeat of Mohmands at Shabkadr on N. W. Frontier of India, enemy's casualties about 1100, British casualties 111.

SEPTEMBER 6TH.—Tsar assumes command of the Russian forces in Western Russia, Grand Duke Nicholas appointed Viceroy of the Caucasus.

SEPTEMBER 7TH.—Russians take the offensive in Eastern Galicia.

SEPTEMBER 8TH.—German Admiralty announces the loss of submarine U 27.

SEPTEMBER 9TH.—Successful action at Bushire in the Persian Gulf.

SEPTEMBER 10TH.—Persistent German attacks on line Osery-Skidel in Western Russia.

SEPTEMBER 11TH.—Zeppelin raid on East coast of England no casualties. Russian captures in East Galicia since September 7th amount to 383 officers, 17,000 men, 33 guns, 66 machine-guns. Recall of Austrian Ambassador demanded by U. S. A. on account of undiplomatic behaviour.

SEPTEMBER 12TH.—Russian capture another 39 officers and 2,500 men in E. Galicia. German advance on Vilna, the Vilna—Dvinsk railway and east of Skidel. Zeppelin raid in England, no casualties.

SEPTEMBER 13TH.—Zeppelin raid on Kent, 4 casualties. French air raid on Tries, Dommary, Baroucourt, Donaueschingen and Marbach. Austrian torpedo-boat sunk by French submarine in the Adriatic. Russian advance in Volhynia. Total Austrian and German prisoners taken by the Russians from August 13th to September 13th amount to over 40,000.

SEPTEMBER 14TH.—French air raid south east of Metz. Russians advance from R. Sereth to R. Strypa in E. Galicia.

SEPTEMBER 15TH.—Allies bombardment of German positions on the western front continues. Russian line runs from Riga, east of Dvinsk, Vilna, Slonim, Pinsk, Rovno, and Dubno, thence east of Tarnopol, west of R. Strypa to the

Dniester and thence along the Dniester to Roumanian frontier.

SEPTEMBER 16TH.—Admiralty admit loss of submarine E 7 in the Dardanelles.

SEPTEMBER 17TH.—Official account of Zeppelin raids on London gives the week's casualties as 38 killed and 124 injured.

SEPTEMBER 18TH.—Fall of Vilna; Russian forces in grave peril of being surrounded. Renewed German attacks on Dvinsk.

SEPTEMBER 19TH.—Bulgaria mobilizes and announces an armed neutrality.

SEPTEMBER 21ST.—Successful Russian retreat from Vilna; Germans repulsed near Vilna, and are driven out of Smorgon.

SEPTEMBER 23RD.—Russians reoccupy Lutsk in Volhynia. Russian success at Vileika, east of Vilna. Germans driven back near Pinsk behind the Oginiski Canal. Greece mobilizes in reply to Bulgarian mobilization.

SEPTEMBER 25TH.—Great Allied Advance in France, British attack to the east of Grenay and Vermelles, capturing the western outskirts of Hulreh and the village of Loos, and progress near Hooge; the French gain the cemetery at Souchez and the remainder of the Labyrinth, and in Champagne break the German lines.

SEPTEMBER 26TH.—French and British gains consolidated. French capture Souchez and reach La Ferte and make further progress in Champagne.

SEPTEMBER 27TH.—British offensive east of Loos progressing. French before Germans second line in Champagne. General Foch defeats German forces near Vileika.

SEPTEMBER 28TH.—Further British progress around Loos facing the German third line. Defeat of the Turks at Kut-el-Amara on the Tigris; they retreat towards Bagdad. Terms of Anglo-French loan in United States settled; \$500,000,000 Five-year Five per Cent Bond to be issued at 98.

SEPTEMBER 29TH.—French engaged with the German

second line in Champagne at the Butte de Tahure and at the Navarin Farm. French reach Hill 140 in the crests of Vimy.

SEPTEMBER 30TH.—Further French progress in Champagne, and also at Neuville. Von Mackensen masses 250,000 guns on the Serbian frontier.

OCTOBER 1ST.—Foreign Office announcement that German officers have been arriving in Bulgaria. French progress in Artois on the heights of La Folie, and in Champagne.

OCTOBER 2ND.—Bulgarian forces massing on the Serbian frontier. German battalion attempting to cross the Danube at Semendria repulsed by the Serbs. Germans again threatening Dvinsk with envelopment.

OCTOBER 3RD.—German counter-attack against British positions succeeds in retaking the greater part of the Hohenzollern Redoubt.

OCTOBER 4TH.—Russian Ultimatum to Bulgaria; Russian Minister to leave Sofia if Bulgaria "does not within 24 hours openly break with the enemies of the Slav cause and of Russia" and expel all German and Austrian officers. Debate in the Greek Chamber; a vote of confidence in M. Venezelos's policy of assistance to Serbia passed. Turks defeated in the Caucasus near Van.

OCTOBER 5TH.—Allied Forces land at Salonika, at invitation of Greek Government; M. Venezelos, informed by King Constantine that he cannot support his policy, resigns. Lord Derby appointed Official Director of Recruiting.

OCTOBER 6TH.—Austro-German invasion of Serbia begun; the Drina, Save, and Danube crossed. New French advance against German second line in Champagne, the Hill of Tahure and the district beyond the Navarin Farm taken. German assaults on Dvinsk; desperate fighting at Grand Grunvald; attempts to cut Riga-Dvinsk railway.

OCTOBER 7TH.—French gain ground in "The Trapeze," south-east of Tahure. Fighting at Garbounovka, nine miles from Dvinsk. Sir Ian Hamilton reports a gain of 300 yards

along the whole centre—four miles—of the Suvia front in the past month. M. Zaimis Premier in Greece.

OCTOBER 8TH.—German attack on Loos repulsed; British gain possession of a German trench 500 yards west of St. Elic. Petrograd *communiqué* announces German transport shelled and destroyed by British submarine in the Baltic.

OCTOBER 9TH.—Belgrade occupied by Austro-German troops. General Ivauroff advancing in Galicia. German steamer Kulta, of Lubeck, torpedoed by a British submarine in the Baltic.

OCTOBER 10TH.—Heights south of Belgrade captured by the Germans. French progress in Souchez Valley, Givenchy Wood, and the ridges towards La Folie; French gains in Champagne extended. Germans driven out of Garbonnovka.

OCTOBER 11TH.—Bulgarians cross the Serbian frontier east and south-east of Nish. Semendjia, on the Danube, captured by the Austro-German forces. General Ivauroff breaks the Austro-German line at Hajvoronka, on the Strypa; French progress north-east of Souchez and on the heights of La Folie; French dominate La Goule ravine in Champagne. German steamers torpedoed by British submarines in the Baltic.

OCTOBER 12TH.—German progress south of Belgrade; Pozarevatz attacked. Greek Government declines to assist Serbia. French progress in Champagne; Russians attack on the line from Dvinsk to Smorgon. Italian success in the Carnia. Miss Edith Cavell shot by order of German Court-martial in Brussels for harbouring Allied soldiers and helping them to escape.

OCTOBER 13TH.—M. Delcasse, French Foreign Minister resigns. British take German trenches behind the Vermelles-Hulluch road, and the main trench of the Hohenzollern Redoubt. Russians driven back across the Strypa. Zeppelin raid on the London district, 32 civilians killed and 95 injured within, and nine killed and six injured outside the area, and 28 military casualties.

OCTOBER 14TH.—Bulgaria at war with Serbia; war declared by Great Britain. Pozarevatz stormed and taken by the Austro-German forces south of the Danube. Russian success at Vessolovo, near Dvinsk. Fighting on the Strypa at Hajvoronka; Germans driven across the river.

OCTOBER 15TH.—Heavy fighting between French and Bulgarian troops at Valandova, near the Salonika-Nish line. French gain possession of the summit of Hartmanusweilerkopf in the Vosges.

OCTOBER 16TH.—Austro-German forces 10 miles south of Belgrade. Franco-Serbian forces repulse Bulgarians at Valandova. Russians repulsed at Gross Eckau. Petrograd announces five German transports sunk in the Baltic by a British submarine. British Government declares a blockade of the Bulgarian coast.

OCTOBER 17TH.—Austro-German troops 15 miles south of Belgrade. Bulgarians capture Egri-Palauka and cut the Nish-Uskub railway at Vrania, Allied Note to Greece; Cyprus offered to Greece in return for participation in the war.

OCTOBER 18TH.—German advance on Riga; Borkowitz on the Dvina captured. Heavy fighting on the Styr; Russian success at Chartoryisk. Austro-German troops 20 miles south of Belgrade; Obrenovatz on the Save taken. Fierce fighting between Bulgars and Serbs at Vrania; 20 miles of railway line in the hands of the Bulgarians. Italy declares war against Bulgaria. Two German steamers torpedoed by a British submarine in the Baltic. General Sir C. C. Monro appointed to the command of the Mediterranean Expeditionary Force in succession to General Sir Ian Hamilton. Sir Edward Carson resigns from the Cabinet.

OCTOBER 19TH.—German attacks on British positions from the Quarries to Hulluch and at the Hohenzollern Redoubt repulsed. German advance on Riga; fighting at Olai, 12 miles south-west of the city. Two more German steamers torpedoed in the Baltic by a British submarine. Lord Derby's speech on recruiting; recruits to enlist at once

and to be called up as required in 46 groups.

OCTOBER 20TH.—Germans capture the bank of the Dvina from Borkowitz to the mouth of the Berze. Russians carry German positions east of Batmovitchi, taking 3,500 prisoners. German advance in Serbia progressing; 25 miles south of Belgrade. Bulgarians occupy Veles; Allied forces on the front Strumnitza-Krivotak.

OCTOBER 21ST.—Ivanoff defeats the Austro-German forces at Novo Alexinetz, north of Tarnopol, taking 7,500 prisoners. Bulgarian attack on the Salonika—Nish railway progressing; 100 miles of line captured and Kumanovo occupied. Bulgarians repulsed by French troops near Rabrovo, south of Strumnitza. British Fleet bombards Dedeagatch; 1,600 Bulgarian soldiers killed. Russian Fleet bombards Varna.

OCTOBER 22ND.—Bulgarians occupy Uskub; Allies forces in touch with Bulgarians at Krivotak; Bulgarians again repulsed by French at Rabrovo. German success near Dvinsk; Illatsk stormed. General Italian advance; 1,000 prisoners taken on the Isonzo front. The King's Message to his people; appeal to men of all classes to enlist.

OCTOBER 23RD.—Germans across the Danube at Orsova; Bulgarian Army under General Bojadjeff crosses the Timisk and occupies Pralovo. German cruiser Prinz Adalbert torpedoed and sunk by a British submarine in the Baltic.

OCTOBER 24TH.—French capture "The Courte" in Champagne, south of Talmur. Intense fighting before Riga; Germans capture island of Dahlen in the Dvina.

OCTOBER 25TH.—Franco-Serbs recapture Veles, and threaten Uskub. Bulgarians retire on Ishtip. Austrians occupy Klatovo, and are almost in touch with the Bulgarians. Further French progress at "The Courte."

OCTOBER 26TH.—Austro-German and Bulgarian forces in touch at Lechitza. Austro-Germans within 2 miles of Kragujevatz. Serbs retreating along the line Zaitza-Kragujevatz. War office announces torpedoing of British transport Marquette in the Aegean Sea. Sight German progress in

the Dvinsk region.

OCTOBER 27TH.—Austrians across the Drina east of Vislegard; Montenegrins fighting in this sector. Uskub retaken by Serbians. Varna bombarded by the Russian Fleet. Total Italian captures for a week along the Isonzo front over 5000.

OCTOBER 28TH.—French Ministry resigns; new Cabinet being formed with M. Briand as Premier and Minister for Foreign Affairs and General Gallieni as Minister of War. Mr. Tennant announces in House of Commons that Lieutenant-General Sir Bryan Mahon is in command of British Forces in the Balkans.

OCTOBER 29TH.—Bulgarians recapture Veles; Strumuitza occupied by the French. General Joffre in London. Total British casualties to October 9, 493,294.

OCTOBER 30TH.—Germans retake summit of the Butte de Tahure; otherwise defeated in an attack in Champagne.

NOVEMBER 1ST.—Germans attempt to cross the Dvina above Friedrichstadt but were unsuccessful.

Russian Troops reported to be concentrating at Odessa and Sevastopol. Russian fleet bombard Varna and Bourgas.

Desperate fighting at Pirot. Violent German attacks and bombardment in Champagne. Auxiliary Sweeper H. M. S. "Hythe" sunk, 10 crew, 2 military officers and 143 men missing.

NOVEMBER 2ND.—Russians make successful counter attacks at Dvinsk. Fierce fighting in the Strypa region, 5,000 Austrians captured.

Heavy fighting in Champagne between Tahure Hill and the Courtine. Attack made by masses of troops brought from the Russian Front.

NOVEMBER 3RD.—Bulgarians take the Kachanik Pass. Zeppelin destroyed by accident near Namur. Desperate fighting between Tahure Hill and the Courtine. All the German assaults driven back. Anglo French force occupy Tibati in the Cameroons.

NOVEMBER 4TH.—Russians report heavy German attacks N. W. of Tchartoryisk and Tarnopol. Russians make a successful counter attack taking 400 Austrians prisoner. French submarine sunk in Sea of Marmora.

NOVEMBER 5TH.—Fierce fighting at Givenchy, and at La Courtine. Russians gain some ground round Illuxt, at Lake Seventen. Successful Forest fighting west of Tchartoryski. Heavy fighting N. W. of Gotiza. Kragujevatz evacuated by the Serbians. Turks make 4 attacks on the extreme right of Anzac. British forces capture the Banya Mountain in the Cameroons after hand to hand fighting with dynamite bombs.

NOVEMBER 6TH.—Artillery fighting on Western front. Serbians defeat the Bulgarians at Izvor after a battle lasting several days. Bulgarians retreat towards Kupruiu and also evacuate the R. bank of the Vardar.

NOVEMBER 7TH.—Russians make a surprise attack on the Strya and capture 8,500 prisoners, a number of officers and machine guns. Desperate fighting in the regions of Riga, Jacobstadt, Dvinsk, Styr. Fighting between the Bulgarians and French at Krivolak.

NOVEMBER 8TH.—Violent artillery actions especially in Artois, at Loos and Givenchy Sectors and in Champagne, east of Tahure and North of Massiges. Russians take 1000 prisoners at Kolki and in the lake country East of Vilna.

NOVEMBER 9TH.—Italians take the fortified snow clad summit of Col-di-Lana. Lord Kitchener leaves for Salonika. German Cruiser "Undine" torpedoed between Trelleborg and Sassnitz. French defeat the Bulgarians on the Vardar taking 2 guns.

NOVEMBER 10TH.—Artillery fighting only on the W. Front. Russians at Budki capture 200 prisoners and 20 Machine guns. Bulgarian attack on Monastir driven off. S. African contingent to be sent to E. Africa.

NOVEMBER 11TH.—Artillery fighting and mining in the Loos and Souchez sectors. Petropiat reports that General

Ivanoff's armies in Volhynia captured during the last 10 weeks 125,000 prisoners. German Cruiser Frauen-Lob reported to have been torpedoed.

NOVEMBER 12TH.—Serbians retake the Kachanik Gorge. Serbian Government move from Mitovertza to Krushevo. Germans occupy the entire line of Kralievo, Kragujevatz, Patrovats. S. S. Mercian attacked by a submarine in Mediterranean but escaped with a loss of 23 killed, 30 missing, 50 wounded.

NOVEMBER 13TH.—Comparative quiet in France. E. 20 reported as sunk in Sea of Marmora. S. S. Southland with Australian troops on board torpedoed.

NOVEMBER 14TH.—Russians drive the Germans back to within 10 miles of Mitau. French get within 7 miles of Kuprulu after heavy fighting. British on the French right also advance. Dedeagatch bombarded by the Italian cruiser Piemonte.

NOVEMBER 15TH.—Heavy fighting at Illuxt. Fighting with the Bulgarians on the left bank of the Cerna.

NOVEMBER 16TH.—Bulgarians threatening Prilep and Monastir.

NOVEMBER 17TH.—Shah declares openly that he is the friend of Russia and England, despite German intrigues. Hospital Ship Anglia blown up by a mine, casualties about 85.

NOVEMBER 18TH.—Violent French bombardment of German trenches. French Chamber decide on the unrestricted use of asphyxiating gases by the French Armies. British success at Valandovo-Rambrosho, French drive the Bulgarians out of Kastorino.

NOVEMBER 19TH.—The 52nd Division makes a most successful attack in the region of Krithia. Heavy fighting round Goriza.

NOVEMBER 20TH.—Monastir threatened. 5000 Serbians forced from the Babrina Pass after holding out against 50,000 Bulgarians for 16 days. Zeppelin, 18, reported to be destroyed at Tondern while being inflated.

Nov. 21st.—Usual artillery bombardments in France.

Germans reported to have withdrawn 7 Army Corps from Russia. Lord Kitchener visits Athens.

Nov. 23rd.—Serbians fight successful rear guard actions at Gaillona. Artillery bombardments in Artois, Champagne, Velikiplanu, Mt. Gegovatz and Alsace. Germans reported to be sending quantities of munitions to Bulgaria down the Danube in lighters. Desperate fighting on the Italian Front. Italians take Doberdo.

Nov. 24th.—Artillery duels in France. Commonwealth decide to bring the Australian contingent up to 300,000 men by next June. Germans report that 300,000 Russians are concentrated on the Rumano-Bulgarian Frontier. Berlin also reports 200,000 at Odessa, 80,000 at Ismail, and 70,000 at Reni. The four Easte Ministers send Greece a note asking for her attitude to be defined.

Nov. 25th.—Violent Austrian counter attacks against Col-di-Lima, Zugore, and Oslavia are all repulsed, San Martino taken. Brisk and successful fighting on the Riga front. Serbian Government moves to Scutari. French attack the Bulgarians at Krivolak. Desperate fighting between the Bulgarians and Serbians at Prilep.

Nov. 26th.—Vigorous fighting round Goriza. French suffer 2,000 to 3,000 in one day to the War Loin. After 40 hours battle 25,000 Bulgarians drive the Serbian defending force, 4,000 strong, from Prilep to Karasson.

Nov. 27th.—Violent fighting in France. Violent struggle in the Labyrinth. All quiet on Eastern Front. Goriza being steadily bombarded. Turks in the Dardanelles make three unsuccessful attacks on British trenches. Swiss reports say that Germans are sending large forces into Servia. Allies withdraw without loss to the left bank of the Cetina. Bulgarians within 20 miles of Monastir.

Nov. 28th.—Kaiser appears on the Eastern Front to encourage his troops. Greek Government reply to a cable in the mid-the easterne note. Mean Serbian army in position parallel to the Albanian Frontier basing on Durazzo. Anglo-

French forces in the Cameroons closing on Jaunde.

Nov. 29TH.—Heavy snow in Serbia. Serbians retiring from Prizrend.

Nov. 30TH.—Turkish strength at Ctesiphon reported as 4 divisions. One division was wiped out. British force retires lower down the river.

DEC. 1ST.—British Casualties to date 510,230, of that number 4,620 officers and 69,272 men killed on the Western Front and 1,504 officers and 21,531 men killed in the Dardanelles.

DEC. 2ND.—Trench fighting and air raids in France. Bulgarians reach the Greek Frontier. 6,000 Austro-German troops reported to be at Rustchuk.

DEC. 3RD.—General Joffre appointed C.-in-C. of the National Armies of France. Nothing to report on Western Front where rain is falling heavily. Austrians and Germans enter Monastir. Montenegrin success at Fotcha.

DEC. 4TH.—Heavy fighting at Goriza in snow storms.

DEC. 5TH.—Heavy fighting in Strumnitza region.

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"Recognising that the Domiciled Community of India is of value for military purposes, what is the best method of utilising it? Suggestions for its organization and training."

BY R. B. EW BANK, I.C.S.

The term 'domiciled community' is one that it is extremely difficult to define. Legally, if it means any thing at all, it would probably be applied to all foreigners whose domicile of origin is abroad, but who by taking up their residence permanently in India have made it their domicile of choice. Common usage however rules out this explanation. The term is one that has been brought into currency by journalists during the last few years to describe Europeans permanently settled in India and that section of the population who are of mixed European and Indian descent, but who now regard with great disfavour the term 'Eurasian' by which they were previously known. Even this description is inconveniently vague, since it covers persons in every rank of society, varying in race from the pure European to the Indian, in whom the strain of European blood is practically undiscernible. At the outset therefore an attempt must be made to fix the meaning of the term more precisely and to define which part of this heterogeneous community it is that has a special military value.

It may be assumed that the European settled in India and the man of mixed but predominantly European descent would have much the same military value as the ordinary Englishman born in Europe. This has been recognised in Army Regulations India, which make any British subject

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of European parentage, eligible to enter the British service, and define 'European parentage' as including "a person whose father and maternal grandfather or whose mother and paternal grandfather were of pure European origin, or who is the child of a marriage between persons of the above descent." To this section of the domiciled community a career in the Army is already open without any restriction, and in order to make enlistment easy, special recruiting stations have recently been established. It may be assumed therefore that no further suggestions are invited with reference to it. The subject matter of this essay will be the other section of the community, which is at present debarred by birth from enlistment in either the British or the Indian Army.

It is clear that the members of a community, which includes persons of such varying degrees of mixed descent, cannot all be of equal military value, and that some criterion must be established to differentiate those who may be supposed to possess the special military qualities which distinguish the community from those who possess them faintly or not at all. It is difficult to generalize about so diversified a body, but it would probably be true to say that the special qualities which we would expect to find in it are, firstly, unquestionable loyalty springing from a complete community of interest and sentiment with the British race, secondly, a capacity to work without inconvenience in a tropical climate and a readiness to serve continuously in India, and thirdly (though perhaps less markedly) a capacity to work more or less harmoniously alongside of either Europeans or Indians. The simplest method of distinguishing in which portion of the community these qualities might be presupposed, would be to impose a hereditary test, and require that at least one of the two grandfathers should be of unmixed European descent. But the plan would be extremely difficult to evasively, and would certainly not ensure that the qualities sought were really present. In practice it would probably be found more effective to rely on

some such empirical tests as the following. Firstly, they should be Christians, in order to secure that to a large extent they will share the moral and intellectual outlook of Europeans. Secondly, as far as circumstances allow, they should follow European manners with regard to food, clothing, etc. Thirdly, they should habitually use the English language. Fourthly their schooling and early upbringing should have been conducted on European lines. And lastly they should retain very distinct physical signs of their European ancestry. The proposals made in this paper for the military employment of the domiciled community are put forward on the assumption that they refer only to that section of it which is not of "European parentage", but satisfies the above five conditions as a minimum, the remainder of the community being excluded as of no special military value.

In order to clear away any misconceptions about the magnitude of the problem confronting us, it will be well first to note the numbers of the community and to ascertain its present social and economic status. In the Imperial Census[1] of 1911 the number of Christian Anglo-Indian males in India was returned at 51,232, forming an entirely urban population, scattered over all parts of the country, but chiefly over Bengal and Madras. Between the ages of 15 and 30 years the number of males was 14,956, from which it may be estimated that the number between the recruiting ages of 18 and 25 years can not have exceeded 7,000. The designation 'Anglo-Indian,' which was substituted in 1911 for the previous term 'Eurasian,' was intended by the Census officers to include all persons of mixed European and Indian descent, but there is no doubt that it was to some extent abused. This is proved by the unnatural increase of 15 per cent that occurred in the numbers of the community between 1901 and 1911. It is reported that while only a few Anglo-Indians returned themselves as Europeans, a large percentage of native Christians

[1] Imperial Census Vol. I, Part I pages 140 and 145 and Part II Table XVIII.

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caused themselves to be shown as Anglo-Indians. In the light of this fact and of the five minimum tests suggested above, we should probably not be making an underestimate, if we were to take it that the community does not contain altogether more than 4,000 males eligible for recruitment.

These figures are enough to show that politically the community is far more important than it is numerically, and that in fact it does not yet constitute a very considerable military asset. Fortunately additional statistics are available which confirm this conclusion and still further dwarf the dimensions of the problem. A special occupational census [2] of the Anglo-Indian community was taken in 1911 which revealed the fact that the total number of actual male workers was 21,028, and that the chief occupations followed by them were as follows:—

		Number employed
A. Clerical, Administrative & General.		
1. Owners, Managers and Clerks in Mines and Industries	... ... ...	... 1,733
2. Owners, Managers and Clerks engaged in transport work	... ... ...	... 5,812
3. Persons engaged in trade	... ...	... 1,254
4. Public Forces—		
(a) Commissioned and Gazzeted		... 135
(b) Others	... ...	... 53
5. Public Administration—		
(a) Gazzeted	... ...	... 431
(b) Others	... ...	... 2,251
6. Lawyers, doctors and teachers	... ...	... 1,168
7. Other arts and professions	... ...	... 64
8. Living on private incomes	... ...	... 1,283
9. Miscellaneous Contractors, Clerks, Cashiers	... ...	... 2,144
B. Occupations entailing Manual Labour.		
1. Cultivators	... ... ...	... 81
2. Labourers & Artisans in Mines and Factories	... ...	... 1,213
3. Labourers, Cartmen, Boatmen, etc., engaged in transport		... 1,514

[2] Imperial Census of 1911, Vol. II, Part II, Table XXI.

4. Miscellaneous labourers, beggars, criminals, etc...	614
4, Domestic service	... ... ... 462

These figures have been quoted in detail because they throw a very important light on the whole question. It may be safely assumed that the vast majority of persons in class A are drawing much better pay than service in the Army would procure. They belong to the professional, clerical, and lower middle classes and would with few exceptions be reluctant or unfitted to enlist. This narrows the possible field of recruitment to class B, numbering in all 3881 or (say) 4000. On a liberal estimate not more than one fifth of these persons would be between the recruiting ages of 18 and 25 years' but in order to make full allowance for school-boys and other persons following no definite occupation, who may have been excluded from the return, it may be safer to fix the proportion at one half, and to state the figure at 2000. Again as the majority of these young men would be labourers and menials belonging to the lower classes, it may reasonably be estimated that not more than half of them would be both physically fit for recruitment and able to satisfy the five minimum tests that have been laid down. To this number, in order to avoid all suspicion of underestimating, 500 may be added as possible recruits from class A. The startling results of this calculation is that there are not more than 1,500 Anglo-Indians in India now available for enlistment. When the field is so restricted, we may sweep away at once as chimerical the pleas that are so often heard for a separate Anglo-Indian regiment, and if it is urged that their numbers should be calculated on a 'long service' basis, may ask in reply how the regiment is to be started and what grounds there are for supposing that 'long service' would be acceptable to Anglo-Indians.

Besides disposing of the idea of the possibility of a communal regiment, these statistics suggest other reflections which are relevant to the present enquiry. Firstly, although it is not denied that severe poverty exists among Anglo-Indians and even destitution descending to the terrible depths describ-

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ed by Kipling in his 'City of Dreadful Night', nevertheless their average social status is good and the percentage of professional men, public officers, and families living on private means is high. Secondly, their special bias towards work connected with transport, *i.e.* railways, is noteworthy. Thirdly, the number of them that have risen to gazetted rank in the public services both demonstrates their capacity for responsible office and indicates that, since they are already so well represented, there is no urgent need for opening fresh careers to them in the higher branches of the Army or any other service.

This last argument may perhaps be misleading, since there are many occupations in India, nominally open to every one which no man of European descent can undertake without losing some portion of his self-respect. The alternatives to Government and Railway service are in fact for Anglo-Indians very few. It would therefore be a great benefit to them if further openings could be found in the Army and if the employment offered could be such that it provided suitable scope for the various social grades into which the community is naturally divided.

First of all the case may be considered of the young men of the upper classes, of honorable descent and good social position, whose fathers have in many cases borne His Majesty's Commission, but who are at present prevented by their mixed birth from entering the Army. It is not contended that there are many such, but in every province a few would certainly be forthcoming. The history of India during the last two centuries has proved over and over again that men of this class have often first-rate fighting qualities. The records of the 1st Madras European Regiment [3] or indeed of any of the European Regiments in the Company's Army show what forces containing many Anglo-Indians both among officers and men could do. Nor would it be difficult to multiply examples of indivi-

[3] The Historical Record of the 1st Madras European Regiment by a staff officer, 1843.

dual Anglo-Indians, who, in the days when a military career was open to them, rose to fame as exceptionally capable officers. Among these probably the best known was the son of a Scottish Eusigu by the daughter of a Rajput Zamindar, Lieut. Colonel James Skinner, C. B., [4] who has been generally recognised as one of the most brilliant leaders of irregular cavalry that India has known. Almost equally famous was Sir Robert Warburton, [5] sprung from the marriage of an English officer with an Afghan princess, who for eighteen years controlled turbulent tribesmen around the Khyber pass with a hand of iron. The two sons born to Major Hyder Hearsey [6] and his wife Princess Zuhur-ul-Nissa of Cambay, distinguished themselves during the Indian mutiny, one at the defence of the Residency of Lucknow and one at Sitapur, and the son of Sir John Hearsey by his Anglo-Indian wife, was selected for special praise by Outram himself. Among the adventurers who during the 18th century commanded the armies of some of the native Chiefs, Major Louis Dorridon, [7] one of the Scindia's most gallant officers, was half Indian and half French, and Major Vickers, [7] who chose to be beheaded by Holkar rather than lead his army against the British, had an Indian mother.

These examples are quoted to show that the community has, as a matter of historical fact, produced brave and able officers in the past, and might be expected, if the opportunity were given, to do so again. On this supposition it is suggested that a relaxation of the rule defining 'European parentage' might be permitted in certain cases, and that the best way to make use of the most promising and well-born Anglo-Indian youths would be for the Government of India to hold an annual Cadet's examination, to which candidates should only be admitted by nomination. Such nominations should be granted with caution, and only to such as

[4] Military Memoirs of Lt. Col. James Skinner, C.B., J.B. Fraser, 1831.

[5] Eighteen Years in the Khyber, Warburton, 1900.

[6] The Hearseys, Colonel Pearse, 1915.

[7] European Military Adventurers of Hindustan, Compton.

were considered to be of good social position, thoroughly British in their manners and habits, of good descent, and sprung from families traditionally connected with the Army. The boy who came out first in the examination, and whose age should not exceed 15, might be sent home to England with an adequate Government scholarship to study for one or two years in an approved public school from which he would be required to proceed to Sandhurst, the rules of which might be modified to admit him. He would pass out on exactly the same terms as his British competitors except that he would be noted for employment in the Indian Army. Such an officer with the same traditions, training and qualifications, as his British brother officers, ought to have no difficulty in making himself acceptable and useful to his regiment and in gaining the respect of his men, as his ancestors did in the days of the Company's Army. If the experiment were made as tentative as possible, and for the first few years no nominations were granted except to those who fell very little short of the standard of 'European parentage', it should be possible to introduce the system gradually without provoking any explosion of feeling in the Army. It should be added that, to avoid injustice, pure European members of the domiciled community should be admitted to the scholarship examination on the same terms as Anglo-Indians.

As the census statistics show, a fair high percentage of Anglo-Indians enter the medical professions. Those who choose medicine are already eligible for admission to service in the Army. The Indian Medical Service is open to them on the same terms as to all other candidates, and the Indian subordinate Medical Department (Assistant Surgeon Class) is very largely manned by them. Their work has been thoroughly tested, both in station hospital and on active service, and the general opinion seems to be that on the whole it is very satisfactory. It would not therefore be in any way in the dark to suggest that the class of men which already supplies to the Army good Medical officers must be equally capable of

supplying good veterinary surgeons, since the two professions demand very much the same qualities. The present system is such that with the exception of the farriers belonging to the three non-silladar Madras regiments, no Anglo-Indians at all are employed for veterinary work. The reason is, that on the one hand, the interests of the British Army are looked after by the Army Veterinary Service, recruited at home, and in charge of 21 Station Veterinary hospitals at the chief military centres in India, supervising and controlling the work of the Subordinate Veterinary Service, recruited entirely from among men who have gained practical experience in British Units. On the other hand, for the Indian Army there is no distinct Indian Veterinary Service, superior or subordinate. Every Cavalry Regiment has its own independent veterinary hospital controlled by one of the regimental officers and in charge of a Salutary, while the Units of the Supply and Transport Corps employ Indian Veterinary Assistants. They have gone through a training at one of the Indian Veterinary Colleges, but except for occasional help given by the Army Veterinary Service are under no expert control and, if employed by Cavalry Regiments, are not included for the purposes of promotion and pay in a single cadre. The merit of this system, which no doubt owes its origin to the Silladari system, is that each unit is self-contained and has its own separate ancillary organizations. But the arrangement is antiquated and no longer offers good enough prospects to attract the right kind of men. Ever since the days of the Crimean war the need of separate expert services for special technical duties has been increasingly recognised. The change which must soon be made, might well take the form of an increase in the numbers of the Army Veterinary Service and the inauguration of an Indian Subordinate Veterinary Service to take charge of station hospitals for the use of Indian Units. If as a result of the present war the Silladari system is abandoned, the reorganization proposed could be introduced without difficulty, and even if the system is retained, it should not be

beyond the capacity of the Accounts Department to take over existing hospitals, debiting the Silladars with the average expenditure for the last 10 years and treating any additional expenditure involved as a charge on the Army Estimates. The personnel of the new Service should be recruited not from the smiths and farriers, who, though they have obtained practical experience in the ranks, would in the Indian Army usually be more or less illiterate men of low status, but from trained veterinary surgeons who would be forthcoming from the Indian Colleges on salaries considerably below those expected by such men in England. The regulations of the Service should be so drawn up and pay fixed on such a scale as to attract to it the same class of Anglo Indians as are now recruited by the Subordinate Medical Service, and the training of the two Services, should mutatis mutandis be conducted on much the same lines.

The main bulk of the community which at present finds employment in the railway, postal, and telegraph services or in miscellaneous clerkships, may be placed somewhere between the professional classes and skilled artisans, and this is the section for which openings in the Army are most urgently required. It would not be difficult to suggest ways in which posts might be found for them in the Military Accounts Department, or in the Management of Military Grass Farms or Dairies, or in numerous other quasi-civil capacities, but such work could hardly be regarded as military and would scarcely either satisfy their aspirations or fulfil all the terms of the title of this essay. It will be enough therefore to select from the possible alternatives one or two openings which may seem to be at once of military and civil practicability.

The experience of the Postal and Telegraph Departments which, as may be seen from any Civil List, employ a large number of Anglo-Indians in responsible posts, proves that this is a class of work which they are specially fitted to perform. Apart from the Wireless Signal Company there are in the

Army four divisional signal companies,[8] employing in addition to Indians, 52 British non-commissioned officers and 124 British privates (telegraphists). Their work entails a thorough knowledge of communicating by flag, semaphore, helio, field telegraph and telephone. The companies are organised on a permanent basis and intended to train classes of learners. Their duties do not ordinarily call for exceptional courage or endurance. Pay and prospects are very fairly good and the service is self-contained so that the difficulty of the reversion of Anglo-Indians to British Units can be avoided. It is understood that fresh companies will gradually be formed until ultimately each division has its own company, and it is suggested that the privates of at least two of these companies might well be recruited direct from the Anglo-Indian community and trained in the same way as recruits brought in from British regiments. The non-commissioned officers of these companies should of course at first be drawn from the British Army, but as competent men become available might be replaced by promotions from the ranks. A feature of the service which is likely to prove attractive to the right type of Anglo-Indian is that a certain number of telegraphists are transferred annually from these companies to the Government Telegraph Department, where they are found specially useful in big centres or on frontier posts. The advantages, which would follow from the change proposed are, firstly, the economy and efficiency of employing a staff that would be ready to remain permanently in India with only short terms of leave and secondly, the convenience of not having continually to train fresh recruits. In this case, as in all others, it would be well to proceed tentatively and to ascertain that the change can be introduced without any loss of efficiency or discipline, before permitting recruitment to the extent suggested.

The inclination of Anglo-Indians to enter railway service has already been noticed, but in this direction no avenue of

[8] India Army Order 100, dated February 20th, 1911.

employment can be opened up in the Army. Apart from two companies of Sappers and Minors, which are usually engaged in construction work, a class of physical labour for which the Anglo-Indian is unsuited, there is no military railway service in India. On mobilization the Railway Department of the Government of India assumes direct control of any railway system, and has authority to work it with its existing staff. The system, which has recently been perfected, is not likely to be changed. It is only in the matter of road transport that the present arrangements can definitely be said to be defective. The lack of motor-transport is an undoubted flaw in Indian Army organization, which after the experience of the present war calls for an immediate remedy. It may be assumed that several motor units for transport and ambulance work must soon be formed, together with the necessary workshops and repairing stations. As a corollary a separate branch of the Supply and Transport Corps consisting of expert drivers, mechanics, and foremen will come into existence, and though at first it should contain a stiffening of specially trained British soldiers, the experience and practice of the taxi-cab companies of Bombay and Calcutta indicates that it may well be manned chiefly by Anglo-Indians. At the present stage the proposal is so inchoate and dependent on so many uncertain factors, that it is not feasible to go beyond this assertion or to give detailed suggestions for the organization and training of the corps. Motor Transport Companies have since been introduced—Ed.

For the lowest classes of the domiciled community, consisting chiefly of skilled artisans, no more suitable employment can be found than in the Ordnance Department. The supervising staff is at present hardly large enough to cope with all the work which falls upon it in times of pressure, and would certainly find it a great convenience to have under it a body of intelligent and reliable mechanics who could be trusted to carry out their duties with a minimum

of detailed supervision. A precedent for this proposal is afforded by the Madras Army which included a company of East Indians (*i.e.* Anglo-Indian), now disbanded, known as the Carnatic Ordnance Artificers, [9] and composed of 23 foremen and 122 artificers. Most officers who had personal knowledge of them, speak highly of their efficiency and regret that the Company no longer exists. It is of course essential that the factories and arsenals of the Department should be in charge of an absolutely reliable staff, but it is urged that there is every ground for trusting whole-heartedly to the loyalty of the Anglo-Indian and that he would bring to his work many of the valuable qualities which mark the British mechanic. As an experiment a separate company on the lines of the old Carnatic Artificers should be formed, and if it was found successful further companies might be recruited as an economical alternative to increasing the cadre of the British supervising staff.

Within the limits of a paper of this kind, which must necessarily deal not only with the military, but also with the broad economic and social aspects of the question, it has been possible only to sketch proposals in the barest outline. It must not be forgotten that the organization of the Army in India is based on the assumption that there are only two fields of recruitment, firstly the British race, and secondly certain known and tried Indian fighting tribes, and that the intrusion of a class of men alien to both the British and Indian Service will involve many fundamental changes in the Regulations and is a much more serious departure from tradition than might appear. However, if Anglo-Indians are employed at first tentatively, and not in the fighting line, but in the subsidiary services and departments, there is no reason to regard these difficulties as insuperable. The community is so small in numbers, that no heroic measures are called for.

[9] Military Pay & Audit Regulations of Madras Presidency, 1861, page 361.

But their connection with the British race is so much closer than that of any other Indian people that every effort should be made to satisfy their reasonable claim to serve the Crown in one of the greatest of the public Services.

LECTURE

By

BRIGADIER GENERAL L. C. DUNSTERVILLE

ON

Semo Aspects of the War in France.

YOUR EXCELLENCY, YOUR HONOUR, LADIES & GENTLEMEN,

I hope I may be able to interest you in giving you my personal experiences during 7 months of the Great War, when I was employed under the War Office in France from August 1914 to the end of March 1915.

I do not propose to deal to any great extent with the Political and Strategical aspects, nor with the purely historical point of view. The facts and figures of this Great War, as far as the Censor will let us have them, are just as well known to you as to me. Most of the leading papers give us excellent articles in the tactics and strategy and on the political issues.

I will confine myself, therefore, to what I may call "side lights" on the War, in the form of my own personal experiences, and trust that I may thereby help you to realize the atmosphere in the western zone of operations. You are all in possession of the facts and figures. I will give you merely impressions.

The absence of the black board, of maps and plans will not I hope, dismay you. My reference to maps will be few and general and will not go beyond the knowledge that you all possess of the geography of Northern France from the South East of Paris to the Belgium Frontier.

In the first place, I shall have to tell you how I got there myself. Just before the war broke out, I had been staying at Aldershot for the Brigade Training. Here I found nothing new in methods, but something quite new in the very high standard of efficiency attained.

At the time of the actual declaration of War, I was staying with friends in a small Devonshire village. There was a sigh of relief from those of us who realized all it meant, when the Government decided to throw in their lot with our Continental Allies, but the Devonshire peasant, and the British Public generally, remained very unmoved, and succeeded in thoroughly misunderstanding the situation. They certainly merited the attribute of imperturbability, that trait which is sometimes as much a vice as a virtue. When it meets with the approval of the newspapers, it is spoken of as "that magnificent imperturbability", when the newspapers are angry they call it "calousness and apathy". I daresay it is a compound of all these attributes.

In the village at any rate, the inhabitants did get as far as discussing the situation, and it was then noted that the general inquiry, was 'Why should we go to war for Serbia'? This showed such a lamentable misunderstanding of the whole issue, that it was arranged that a meeting should be held and the situation explained. I, among others, being invited to speak.

I think I made it pretty clear to them that we were not going to war for Serbia, though Serbia was for the moment the focussing-point of the disturbance, and incidentally I referred to the question of Universal Liability for service.

Here I came in touch for the first time in my life with the political controversial spirit that poisons English life to-day. Because this issue had been originally taken up by one political party, the whole question of the defence of ones country, and ones duty to the Motherland, had become a political issue, and my glib speech was classified as political propaganda under false pretences.

The local Radical paper gave a report of the meeting with the following headlines --

"Panic-monors at Bishopsteignton!"

"Cho'erie Colonels states will 'yes'!"

"Violation of an honourable truce!!!!"

The last headline referring of course to the fact that party questions were to be put on one side during the war.

Well, that shows you the sort of people you have to deal with when you come up against the Great British Public. Duty and Patriotism made a party issue!

This poisonous political atmosphere was new to me, and it was not even a great consolation when I found on crossing the Channel, that the French were ten times worse. In France they are all politicians in the first place, and representatives of various professions in the second, and there are enough political parties to tempt and bewilder anybody.

Well, having made myself rather unpopular in my endeavours to give the villagers a few facts to ponder over, I thought I had better get up to London and see if a personal application at the War Office would not be more effective than my written one, which so far had produced no result.

It was not easy for a Colonel of the Indian Army to get employment at that time. That wonderful little army of so-called amateurs that the Germans regarded as a tragic joke, was being sent over the seas with clockwork precision, and extra hands were not wanted.

At last, however, just as I was in despair, came the demand for Interpreters, and in that capacity I reported at the War Office on August 23rd and left for France 18 hours later.

I was one of a party of nine officers, the others being "dugouts" of the British Service, all men of considerable talents and ability. When the history of the war comes to be written, it will be seen how valuable have been the services of these so-called "dugouts"; men who had retired from the Army for many years, but who offered their services in the humblest capacity as soon as war broke out.

As we left England we imagined a future for ourselves on the field of battle, helping in billeting, examining German prisoners, taking messages to French troops, and so on. But our destiny was quite otherwise. There was to be no glory

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in our task, but we were at least to be allowed to feel useful, perhaps even indispensable, and we were incidentally to have great facilities for observation, our employment being at first on Supply trains.

We were called Train Conducting Officers, and our duty was to proceed with trains from base to railhead, and see that they reached their destinations without delay—not so easy a task as it sounds—hand over our supplies and return to the Base bringing back odds and ends from the Front.

We camped in the trucks among boxes of bacon, cases of stores and rather strong-smelling but excellent cheeses, and ran almost as much risk at that time as men at the front from the French system of shunting, which is simply a series of violent collisions. This is really no exaggeration. I have seen trucks derailed, smashed, buffers knocked off, and we had cases of men with broken ribs and other injuries. It is a very rapid and clever method, but is best to watch it from the outside of a truck.

Later on we were removed from the Supply, and taken over by the Director of Railways, and I was made C.O. of the T.C.O.'s. This meant that I had my office in some central town, and travelled up and down the line as I thought fit, and though I was never able to reach the trenches, we were always just behind the line within sound of the big guns.

I crossed the Aisne in September, and latterly was in Bethune, close to Armentieres. Ypres was also within reach but I was recalled before I had an opportunity of visiting that wonderful and long-suffering town.

The French railway lines have worked marvelously, but the strain on personnel and rolling stock and permanent way has been very great. In the first place, too many railway men were taken for the fighting units which left too few to run trains and work the shunting yards efficiently. Then the destruction of bridges and the western third of the German line from Soissons through Arras to La Bassée has left no choice

of lines, no alternative routes, and with the enormous traffic on the line Rouen—Amiens—Abbeville—Boulogne, and thence along the Belgian Frontier it is a wonder that the road has lasted out, while the rolling stock, with limited facilities and still more limited opportunities, for repair, is still performing marvels, but looking very tired and shaky.

All this explains the need of a T. C. O., an individual who has never been heard of before this war, and who has chiefly been necessitated by the language difficulty for an army operating in an Allies country.

The train never looks very safe, accidents have occurred, and no single journey ever takes place without the T. C. O. being called in to exercise his ingenuity and initiative. Sometimes the train has come in half and had a collision with itself, sometimes it has real collisions, wagons are derailed, hot axles occur and so on. Added to all this is the fact that various trucks have to be cut off at various points *en route* probably in the middle of the night and small parties of men or officers delivered at their destinations. If you have never tried it, you can have no idea what it is like trying to wake the British soldier about 3 a.m. on a cold night, when he is well muffled up in his blanket. The train stops only a few minutes, the yard is unlighted and as the train moves off again without any warning to you, you run the risk of being left behind or travelling for an hour or more on the step of a truck on to which you have jumped at the last moment.

All these matters might, you think, be left to the guard—so they might be—but in that case nothing arrives anywhere.

The train pulls up at daybreak at Railhead, (probably the wrong one) and you find the little parties of men that should have been left at 20 different destinations, cooking their morning meal beside the train, while trucks of ammunition urgently required miles down the line and labelled in every conceivable way to call attention to that fact, are reposing in the yard.

Overnight you talked with the *Chef de train*, polite, amiable, and most anxious to please. He repeated all your instructions most carefully after you, bowed and said good night, and then thought no more about it. Now that things have all gone wrong, you search for him to tell him just what you think of him, and, of course, you find another smiling and amiable fellow who explains that he relieved the other some time ago.

The Main Supply Trains now run under special arrangements, and are made up so simply that they require little supervision. The Train Conducting Officers take charge of "Ramassage" trains, that is trains composed of everything except the bulk supplies.

Of these about 4 to 6 leave the various bases daily for the front. They contain Gifts, Parcels, Mails, Ordnance Stores, Mechanical Transport Stores, Clothing, Ammunition, odds and ends of Supplies, and parties of officers and men for various destinations, not numerous enough to form an entire troop train.

The journey from base to railhead and back lasts as a rule four days. This seems a long time if you measure the distance on the map from Havre to the Belgian Frontier but the trains are necessarily slow and require to be re-sorted at least twice en route, and it takes nearly a whole day at rail-head to discharge one's stores and collect whatever one has to take back. Now that the Germans are holding us back on that long line from Belcourt to Newport, since October, rail-heads have been fixed, and seldom change.

It was very difficult, however, in the early days of the war, during the retirement from Mons, and then the forward movement to the Aisne and thence to the present line near Ypres.

During the retirement your destination was as a rule not fixed until you reached the Regulating Station some 30 miles from the enemy, and then you were never certain whether you or the Germans would reach the point first.

Having reached your point you discharge your train as rapidly as possible and take over your miscellaneous load for the return journey. This time your train is filled with very different material, consisting mostly of German prisoners, sick men, light cases for whom no room exists on the hospital trains, wounded horses, battered guns, captured arms, surplus supplies, and small parties of officers and men just out of the trenches proceeding on leave or duty.

The fellows from the trenches are of course vastly interesting, and it is very extraordinary that the humble private soldier is able as a rule to tell a story far more clearly and vividly than the highly-educated officer. The officer is more reluctant to describe his experiences and lacks the direct simplicity of language.

The system of supply is very interesting. It is of course on the lines laid down in the book but with certain modifications and developments. The Sea base, or one of the Sea bases, is Havre. Here an enormous cotton shed—the second biggest shed in the world—has been taken on lease in the docks. The ships discharge their stores on the Quay alongside and the stores are then stacked inside the shed in groups, each group containing every kind of supply, so that several trains can be loaded simultaneously at various points.

In this shed are kept at least ten days reserve supplies for the troops at the front, which represents an enormous bulk. A great deal of moving and handling has to be done, and in order to obviate the use of trained soldiers, on purely fatigue duties, a special branch of the Army Service Corps was enlisted at the beginning of the war. These are the Labour companies. The men are labourers pure and simple, enlisted chiefly from the neighbourhood of docks in the home ports, they wear the same uniform as the rest of the army, and were actually, I believe, at one time given arms and ammunition, which were later very wisely taken away from them.

They are highly paid and do splendid work but they

take a good deal of managing, their behaviour and notions of discipline are not in accordance with military ideas, they have a natural tendency to spend their pay in liquid refreshment, and their chief recreation is the using of their fists and other handy weapons on each other. Still there is no doubt they have been a great success and it would be hard to do without them.

The troops at the front are divided for supply purposes into numbered sections both for convenience of reference and the baffling of spies. Thus a train label will be "3rd Section" instead of "5th Infantry Division".

Subaltern officers of the A. S. C. with a proportion of labourers are told off permanently in reliefs to each section.

These officers and men load up the trains daily, the officer alone accompanies the train to the railhead and hands over to the supply officer there. The advantage of this system is that there is no break in responsibility and the very officer who loaded the train is the officer who hands over the supplies at the front.

At railhead ten motor-lorries convey the stores to rendezvous, horse transport takes them still nearer, to the refilling points, and here the various units must take them over and convey them to their Headquarters.

I spoke earlier of the necessity of having a Train Conducting Officer in the trains. True, for many hours at a stretch he has nothing to do but yawn, but every now and then come moments when it is indispensable to have a man who can talk the language and who also is capable of seeing that the right thing is done and in the right way.

Towards the end of August as our army was rolling back on Paris, I took a Supp'y Train up to Compiègne. It was necessarily more important than ever at that time, that the tired men should get their food, but it was a difficult job to get it to them without running into the mouths of the equally hungry Germans. I had a French Railway Officer with me to assist in dealing with the French Railway Staff.

We arrived in the shunting-yard at Compiegne at about 5 a. m. when it was still dark, and I talked over the situation with the French officer. We agreed that as it was impossible for the lorries to be found or to find us till day-break, he should go off to the station and find out how things stood, while I remained with the train.

At about day-break he returned looking very woe-be-gone with the information that the Uhlans were already on us and it would be impossible to issue anything. Orders had been given for the immediate evacuation of the station, and the supplies must be abandoned or destroyed. I suggested that as a third course they might be removed and set about procuring engines for each of the 3 supply trains I found in the yard, one my own and two that had got there no one quite knew how.

I then went up to the station myself and found a very animated scene in which the only point of calm was to be found in the persons of two British Officers standing side by side like Tweedledum and Tweedledee, and reminding me of a small rock in a very stormy sea.

About the same height and necessarily dressed alike, each wore a rather grubby Burberry and smoked a short briar pipe, while they gazed placidly to their front with that sort of unfocussed look in their eyes that only Englishmen can achieve. I do not say that it is an accomplishment to be proud of, but good or bad it is certainly a national trait.

They turned out to be two excellent "dugout" officers who had retired many years previously and who had now come to life again to take part in the Greatest War in the world's history.

But neither the greatness of the War, nor the excited gesticulations of the French officers and officials who surrounded them, seemed to have produced any effect on them at all. I describe this scene at length because it is just typical of so many similar scenes with which I was daily confronted and which both amuse and inspire the vivacious and mercurial Frenchman.

Finding that none of the French could speak English, and that (a very rare event) neither of the British officers could talk one word of French, I explained the situation to them and told them that it was stated that the Germans were already on us and the station was to be immediately abandoned. They said they doubted the urgency, and so did I. There were many reasons which I need not go into now which convinced me that the Germans were very unlikely to be as near as all that. I got out into the town, visited the French Head Quarters, brought back a French Staff Officer with me—an excellent fellow with a soothing manner—and quieted things down at the station. All supplies were issued and we got the empty trains away before the Germans got into the town.

Those first two weeks of the War were perhaps the most wonderful and the most critical of the whole campaign. In the 11 days between August 23rd and September 6th, that "despicable little army", Field Marshal French's, had been flung into the lion's jaws at Mons, had extricated itself by a miracle, had retired fighting on to Paris, had pulled itself together again and was now ready to drive the German army back from the Marne to the Aisne. The German blow was well calculated. Even after the delay caused by the resistance of Liege, the Germans were able to fall on an absolute, unprepared enemy. The British Army, unsupported and nearly surrounded, had to make a rapid retreat and the French Army began its retirement before it ever got even into position.

It was in these early days that the unflinching cheerfulness of our men was perhaps our greatest asset, and it certainly had a very great and telling effect on our Allies.

The confusion was considerable, units lost themselves and men lost their units. Here and there battalions were isolated; sometimes, only once, sometimes batches of five men, sometimes one man alone fighting small rearguards on their own. But as each unit or group retired it was with ranks up and

faces to the foe. With a rather tired smile on his cheerful countenance and singing as ever that ridiculous and senseless song, "Tipperary", the British soldier gave one more the impression of a march home from a field-day than of a flight in terror from a redoubtable foe. There was no thought or suggestion of anything like panic, and just at the moment when the Germans turned aside from Paris under the impression that the British Army had ceased to exist that tough little Army had already begun to stand up for the second round and prepare to chase the Germans from the Marne to the Aisne.

Of all the remarkable things that happened during that retirement none could give a better idea of the confusion that reigned than the following incident.

One morning about dawn a British battalion retiring found itself marching for some miles parallel to another battalion a quarter of a mile off. There was a very slight mist and as the light grew clearer the Commanding Officer put up his glasses to identify the other battalion and found it was a German one!

It was obviously not a situation for fighting or in any way attracting too much attention, so he quietly diverged and separated himself from his unpleasant companions without being detected.

It is interesting to note that at this time the whole of the French Coast was left undefended and the Germans were free to walk into Dunkirk, Calais, Boulogne and Havre which could have offered no resistance.

But as they could not possibly foresee the course the war would take, they neglected to seize the coast and concentrated their strength on Paris. German strategy is seldom wrong and although the seaports were tempting, it would have been fundamentally wrong to alter their plans at a moment like that. It would be an easy task to take Paris, and the seaports would thereby fall into their hands without a blow.

The transference of the French Capital from Paris to

Frenchmen would view this idea with a smile, but none the less the suspicion is aroused in the minds of the ignorant.

To return to the summary of events. The retreat from Mons brought the British Army on to Paris at the beginning of September, and on the 6th of that month the allied Army found itself in position south of the river Marne, with its left on Paris and its right on Verdun.

The German Army having arrived opposite Paris, had suddenly swung across the allied front and continued its advance in a south easterly direction towards Chalons-sur-Marne. This change of objective is the great wonder of the War, and no one yet has satisfactorily answered the question why General von Kluck turned aside from Paris at the moment when it seemed within his grasp. True the German troops were exhausted and had out run of their supplies, their lines of communication were disorganised and weak, the Crown Prince's Army had failed to carry out its part of the combined plan by breaking through Verdun, and the main French Army was still more or less intact in the field. All these considerations may have made it seem too dangerous to von Kluck to risk coming up to the walls of Paris, a situation that would deprive him of freedom of manoeuvre. It might thereafter appear best to advance south-east, attack and defeat the French Army in the field and then enter Paris from the East.

Whatever the inducements may have been, the change of direction took place that gave the Allies the opportunity they were not slow to take, of assuming at last the offensive.

One must remember what splendid service was rendered to the cause of the Allies during this critical period by the Russians. On August 24th, 1914, the Russians invested Koenigsberg in Eastern Prussia, and on September 3rd they occupied Lemberg in Galicia, thus keeping the Germans in a very distracted state of mind.

From September 7th to the 11th, the allied offensive was uniformly successful and the Germans were driven back

in confusion to the river Aisne, which they crossed and began to dig themselves in on September 12th and where they are still, more than a year later.

Their retreat was just saved from turning into a rout by the absence on the part of the allies of fresh troops, especially cavalry, to take up the pursuit.

Our own cavalry which had performed prodigies of valour protecting our flanks in the retirement must have been almost worn out and in great need of a rest for both men and horses, and the French Cavalry was no better. This lack of pressure in the pursuit enabled the Germans to burrow into the ground and render their position well-nigh impregnable, and to this is due in no small measure the prolongation of the War.

During this period of the fighting, the train work was very interesting and one had plenty of opportunities for conversation with German prisoners.

It was also just about this time that I began to realize the merits of the motor-lorry drivers. These men are mostly motorbus drivers from London and other big cities at home, they wear the ordinary khaki uniform of the private soldier and they are at all times a pleasure to behold. Their work is hard and often dangerous and they do it with a will.

During the retreat of the Germans from the Marne to the Aisne, I found myself one night at a rail-head—a small country station named Coulommiers. It was the nearest we could get to the army because of broken bridges and others obstacles, but it was a very great distance and the result was that the lorries only turned up at about 2 a.m.

It was one of the worst nights I have ever seen, a hurricane and a deluge, and the country roads were churned up into seas of mud. Yet in spite of all these hindrances every lorry turned up, and turned up smiling, at this obscure little station, took its load and hustled off in the darkness to find its way back to the rendezvous, with the driver looking as cheerful and unmoved as if he were taking

his usual drive on a sunny morning from Piccadilly to Oxford Circus.

Of course it is not merely left to the intelligence of these men to find their way in the dark in a foreign country from point to point—that would be demanding the impossible. They are told off in batches with an officer or an interpreter to guide them. But now and then a lorry has been left behind and the driver has had to exercise considerable ingenuity in rejoining his unit. But it is seldom that he fails to get there.

Among the peculiar services rendered to the War Office during this war must be mentioned that of the small body of gentlemen-chapteurs. These were mostly members of the Royal Automobile Club, who, finding that their services were not accepted in any other capacity, offered themselves with their own cars, free to government to act as carriers and messengers.

One of these men whom I knew was captured by the Germans in August and escaped a few hours later by a piece of good luck. My friend was told off to escort three motor lorries at about 11 p.m. on a dark night to a certain unit. Owing to the confusion of the retirement the task was not an easy one but he endeavoured to carry it out to the best of his ability. Passing through a small village he demanded of the Mayor a guide who would conduct them to some other village known to be on his route. The village schoolmaster, a young man of about 25, was awakened from his slumbers and detailed for the job. His wife saw him into the car and he told her not to worry, he would be back in half-an-hour as he should have been. But before half-an-hour was over he had been shot by the Germans!

The car and the three lorries had not gone far from the village when they ran into an Ulster patrol. It was a case of "hands up" and they were promptly captured. The poor schoolmaster being in mud was at once taken out and shot, perhaps a legal but a very brutal procedure.

During the remainder of the night the car and the lorries followed their captors, sometimes halted and sometimes moving slowly onwards. As day broke they emerged on to a high stretch of open ground, when they came under a burst of shrapnel fire from our own guns. On this the Uhlans dispersed and took cover and my friend with his three lorries turned about and put on full speed for home with a hail of bullets from the patrol whizzing round.

To be recaptured by the Germans would mean certain death, but nothing could disturb the equanimity of the cheerful bus-drivers. At brief intervals they would pull up their lorries, jump down, and dart across a ploughed field to secure some German helmet or rifle as a "souvenir" of the occasion, and their ideas of discipline being very rudimentary, no threats or arguments of my friend had any effect on them. In the end however the whole party got away and finally rejoined the unit for which they had set out, much to the delight of the latter who had begun to get hungry and hopeless.

The path of the armies now lay through the Champagne country, one of the most beautiful parts of France. Empty bottles marked the sites of all the German encampments and trenches and they must have drunk a prodigious amount of that good wine without paying the bill, but the towns and the vineyards were almost untouched, and extraordinarily little damage was done in this district.

Knowing the ruthless love of violence and destruction that has marked the course of the German host, one wonders why this part of the country escaped so lightly. The solution of that problem is that the Champagne district formed part of that area of France which was to be the inheritance of the Crown Prince when the war was over.

With the German Army well on the run, hopes ran high, and even when they crossed the Aisne and dug themselves in behind their network of barbed wire on the reverse slopes of the high ground, it was universally believed that within a

week we should have them on the move again, but these hopes were not destined to be realized, and a year later they are still in practically the same position.

The two armies now faced each other on the line from Soissons to Reims and each set about the task of outflanking the other. The French, in endeavouring to turn the German right near Soissons, compelled the latter to bend Northwards in a right angle leading through Arras in the direction of Belgium.

At this moment, October 7th, Antwerp was being besieged and was evacuated on October 9th, and it was found that a fresh German force was making an advance through Belgium via Ypres on Calais, that is, passing through the gap between the Allies left near Armentieres and the Belgium coast.

To meet this, the British Army, which was very uncomfortably placed in the Aisne in the middle of the French line, was transferred to the left of the line and arrived in the neighbourhood of Ypres just in time to close the gap and keep the Germans out. This was one of the most critical periods of the war and it was just at this moment that the Indian Contingent arrived in the very nick of time and closed the last portion of the gap.

This rapid transference of the entire army from one point to another of the theatre of war was carried out without a hitch and may be considered a very remarkable achievement.

The line of trenches and barbed wire was now complete from Belfort on the Swiss frontier to the Belgian Coast, the last gap was closed, and from that date all manoeuvre has become practically impossible, the fighting resolving itself into the hurling of high explosive shells and bombs at each other, and the mining and countermining of trenches.

In his despatch of 26th November 1914, Sir John French thus speaks of the early fighting round Ypres that stemmed the German torrent pouring on to Calais, "No more arduous task has ever been assigned to British soldiers,

and in all their splendid history there is no instance of their having answered so magnificently to the desperate calls which of necessity were made upon them," and later speaking of the work done by the First Corps under Sir D. Haig, he says:—

"Words fail me to express the admiration I feel for their conduct, or my sense of the incalculable services they rendered."

Well may the Commander-Chief search in vain for superlatives to express the splendid behaviour of his troops. The novelty of this horrible war of bombs, high explosives, 18 inch howitzers used as field guns, poisonous gases, flame projectors, aeroplanes, submarines, mines and barbed wire, makes it hard to institute any detailed comparison with any of the wars that have gone before. But we can at least make a comparative estimate of the courage and stout hearts of our soldiers. Before the war many of us, I might say, most of us, with our minds lingering over the glories of Waterloo, wondered how our men of the 20th Century would compare on the field of battle with their gallant ancestors.

The pessimists thought we were decadent and could never equal the performances of our grandfathers, the optimists dared to hope that we should prove almost as sturdy as they were, but who could have prophesied that our army of to-day would fight through a campaign that would contain at least a dozen Waterloos—and each far more frightful than the famous and gentlemanly battle of 1815—and that the heroism of the troops would immeasurably surpass all the records of previous wars.

One spends much of one's life making surmises and one is so seldom able to put any sort of opinion to the test, that we must be grateful to the Germans for this at least, that they have enabled the Army to prove to the nation that the valour of the British soldier is entirely unimpaired and he still ranks as ever as the finest soldier in Europe.

To attempt a comparison of national qualities is a dangerous task, but being brought into contact with other nationalities compels us to form some sort of estimate of each other's characters.

Before I venture, therefore, to sum up the outstanding qualities of the nations who are brought into contact through this war, I must explain that no one knows more thoroughly than I, the fact that however much we may try to draw up an average character for any nation we must realize that few, if any, individuals truly represent this type, but the type represents an average from which each individual diverges in a greater or less degree. Take for instance the typical character of John Bull, it is a true enough average of English character, but how often does one meet the real John Bull in ordinary life?

Let us start with the enemy and estimate the German character.

The German is stolid, boastful, and proud. He likes to drill or be drilled, to give orders or to take orders, and he knows nothing of that perpetual aspiration for liberty which we English have to excess. This leads in his wonderful army machine to entire lack of initiative. We try to train our soldiers to think and act for themselves. The Germans train their men, as we did 100 years ago, to surrender their entire minds to their leaders, that is, to become simply human machines.

The dominating trait of the German character during the last fifty years has been the insane desire to crush and rule the world. This is undoubtedly a form of sheer national insanity and must lead, as it always has in history, to the final destruction of the nation giving expression to it.

The motto of modern Germany is, "We are the supermen and all means are good that will enable us to impress our will on weaker races, (that is, the rest of world)". It is this idea that has caused the revolting cruelty of the German hosts in the present war.

The Russian is a strong and simple character. He is intensely religious, patriotic, and loyal, devoted to his God and his Czar. He is a brave soldier, but not at all thirsting, like the German, for war and blood shed. In spite of the dreadful tales we hear of Siberia, the individual Russian is the kindest and warmest hearted fellow in the world. He is patient, enduring, and a fatalist and his great asset in this war is that he is inspired with a long born hatred of the Germans.

The Frenchman—is vivacious and emotional, easily depressed or elated, full of contrasts and extremes. He will love you one minute and hate you the next with equal ardour. He has none of our English capacity for indifference or apathy and is always a violent partisan. Politics are food to him and one can hardly hope that he will ever find out what poisonous food they are. He is a good worker, a fine fighter and a brilliant engineer. The leading merits and defects of his character may be found in the history of our occupation of India and most of our Colonies. In nearly every case they were discovered and in the first place developed by the brilliant Frenchman. But the steady determined old Englishman followed closely behind and when he came, he came to stay and invariably succeeded in inheriting the volatile Frenchman's property.

The Englishman.—What shall we say about ourselves?

Certainly we may claim to be phlegmatic and imperturbable. We have no monopoly of honesty, but I think we are fairly credited with maintaining a high standard. Our greatest asset in the present War and one that goes far to inspire our allies is our undoubted tenacity. More than any other race in the world, we know what we want and will make the greatest sacrifices sooner than admit failure in any enterprise. It is the knowledge that this solid determination finally seals their fate, that makes that German cry, "Gott strafe England," and sing the famous "Hymn of Hate."

The English character is much admired, but the indivi-

dual Englishman is not much beloved, he is certainly less "loveable" than any other race in Europe.

During my seven months in France and in earlier years when living in foreign countries, I have come across numberless instances giving examples of all the traits I have enumerated for each nation.

And what heroes this war has produced ! I will tell you of a simple case of quiet English heroism.

Before the war I had a friend in the Indian Civil Service—Mr. G. Gordon, who was then Deputy Commissioner of Jhelum. He had twice been the victim of bomb outrages in India and was a man marked down for assassination by the seditionists, in revenge for the very active part he had taken in tracking them down.

While I was at home in 1914, he also was sent home on sick leave with, as you may well imagine, nerves shattered. The moment war broke out he wrote imploring me to get him any sort of a job that would take him to the front — a peculiar request for a man with nerves shattered !

I replied that I was not likely to be able to help him and forgot all about him, for the time. A few months later in France on a dark night at some station where my train was held up, I ran up against a subaltern of the 12th Royal Lancers taking remounts to the front. With a beaming face my friend Gordon explained to me how he had at last got his heart's desire and was now on his way to join the 12th Lancers. I said good night to him and a month later read of his gallant death at the front.

The instances of wonderful traits in the French character would alone fill a book. I will give you one. At a small station I saw, in the early days of the war, some English wounded being taken out of a train. One man with his arm shattered was put down on the platform in his stretcher. A French lady who was standing amongst the crowd, rushed up to the stretcher, knelt by the side of the wounded man,

kissed his forehead and poured the contents of her purse into his lap !

In England we are taught to control and conceal our emotions, but we can surely admire such a beautiful display of emotion as the above.

The Entente Cordial has been a great success. In official relations everything has worked with wonderful smoothness, and the private relations between the officers and men of the two armies are very cordial, without being gushing.

Of course the entire British Army is talking French—of a sort. The British soldier who serves all round the globe is a great linguist in a small way and wherever he goes he manages to pick up a few indispensable words within a few days of his arrival. In India he has a fine vocabulary of imperatives including the infallible "Dekko" "Jao" "Bolo" and so on.

In Egypt, the young soldiers in 1885 were all talking Arabic a week after they had landed. It wasn't the best sort of Arabic, but it did all right and the natives were kind enough to understand it.

So in France today he is turning his attention to French and manages very well. Some have really quite a good knowledge of the language, others have merely a stock of useful substantives that they string together with English verbs, and they get the amiable Frenchman to understand as a rule.

The first word they learn (it is the catch word of the war), is "Souvenir". When the first troops arrived the kind people who welcomed them so heartily begged for a button or a badge as a "Souvenir". The result was that the entire British Army was soon buttonless and badgeless and corps had to be indicated on coats and caps with irdelible pencil which did not look very well. The most popular badge was the Royal Field Artillery one, because it was held to stand for initials of the three Allies, La Russie, La France, and Angleterre.

Well one can easily understand that the soldiers' mind soon came to regard the demand for a "Souvenir" as a

demand equivalent to, "Please give me something for nothing".

On one occasion I saw in the distance in some fields an old French peasant digging up potatoes, and a sturdy British soldier standing in front of him waving an empty bucket at him. I came up close unobserved and found the conversation consisted in very voluble French from the peasant explaining that times were hard and potatoes getting scarce, and on the Englishman's part of the one magic word "Souvenir", so obviously meaning "will you please give me a bucketful of potatoes to remember you by." The magic word prevailed in the end and the bucket was filled. "Well, well," said the Frenchman, "after all you've come here to keep the Boches out of my fields."

On another occasion a playful soldier removed a large codfish from a fish-stall, astounding Madame by offering no payment and just walking away hugging the fish and murmuring "Souvenir". This was of course very amusing, but a little hard on the shopkeeper and constituted a line of conduct not altogether to be recommended. But, as a matter of fact, the behaviour of our men has on the whole been excellent, and the large pay they receive in comparison with French soldiers who receive about a half penny a day, make them a veritable gold mine for the small grocers and restaurants. It would be interesting to calculate the amount of money England is pouring into France in the shape of petty expenditure by a million officers and men, big Government contracts for buildings, etc., huge rentals for hired premises (they don't let their allies off cheap—John Bull is rich and can well afford to be bled), and enormous railway bills for conveyance of troops and supplies.

I found the supply of "Souvenirs" to kindly French ladies was very embarrassing. One hates to refuse, and at the same time one looks so disreputable, bereft of all buttons and badges. I first of all thought of asking the men to supply the necessary buttons, but that seemed rather

unfair as they obviously wanted all they had got, to express their own gratitude. So I wrote home to my tailors and imported quantities of buttons of which I always kept a pocketful handy.

Talking with German prisoners, and our English wounded was a perpetual source of interest and pleasure. The German soldier was always cheery and ready to talk, especially if one could say one knew his part of Germany and I found them most anxious to impart all sorts of information if leading questions were not put. The German officer were as a rule sulky and uninteresting.

Our own wounded were truly marvellous. Their simple tales of their time at the front were lucid to a degree. It is certain that the feeling, mutual affection and admiration, that constitutes so strong a bond between the officers and men in our army, exists in no other. If I asked the men to tell me all about it, they mostly sang the praises of their officers. If I asked the officers, they dwelt only on the splendid heroism of their men.

Lastly I come to a dear old friend, the Indian follower. In one sense he is the curse of our army system in India. Overseas, as in China, and in the present war he detracts terribly from the general appearance of our Indian troops. Most of the fighting men being at the front, it is of course the Indian follower who is most "en evidence" on the lines of communication, and as he is often not a very presentable specimen, it is deplorable to see him being snap-shotted by our allies as a "type of the Indian Army."

In the summer he is passable, but in winter he shrivels up and presents a most disreputable appearance. Large boots over thin ankles, spindle-shanks wrapped in putties, knees a little inclined to approach each other. On his body a fearful coat invented for him by a kindly Government—warm but ungainly to a degree—and his head! Two or three Balaclava caps concealing all of his features except just the cheekbones and two beady little eyes, and surmounted by a

very unsmart puggaree. What an apparition ! And snapshots of this are handed round by admiring Frenchmen as, "Our brave Indian allies, the Sikhs."

But after all he is just what he is, and with all his woebegone appearance he is not seldom a hero. If you could ask a bhisti for instance of some 20 years service, you would find that he had accomplished on a minimum of pay, deeds that should entitle him to a place on the scroll of honour.

On the whole we may be immensely proud of the achievements both of the small army we sent across the Channel in the first instance, and the later magnificent performances of our Territorials and the New Army. The material of the new army is of the very best, and the very great difficulty of obtaining suitable officers has been to a great extent overcome.

We have shown Europe an example of an army of the highest efficiency, not only as a whole, but in each branch, we have demonstrated our superiority, except from the mechanical point of view, over the enemy. Cavalry, Artillery, Engineers, Infantry and Airmen have each established a moral superiority.

The work of the Medical Corps has been little short of marvellous and the numberless instances of splendid heroism, resource, and powers of organisation that occurred in the retreat from Mons, form a very glorious page in the annals of the Royal Army Medical Corps. Medical officers are armed, however, which I feel sure is a mistake, and has given at times an excuse, although an unfair one, to the Germans for disregarding the Red Cross badge.

The Army Supply Corps has received its meed of praise in the papers, it justly claims to have failed on no occasion since the first day of the war to deliver supplies up to time at the spot required.

The Ordnance Department, though rather more in the back ground—an army is inclined to think of its food

first,—has done work that would astonish those who will go into the facts and figures when those are made available at the end of the War. Not only the supply of ammunition, arms, and equipment, and repairs to armament, but the whole of the clothing supply has fallen to the share of this department on a scale never hitherto contemplated and for which no machinery existed at the time the war broke out.

Truly this has been a wonderful war. At the beginning we were quite well informed in all Intelligence matters. We knew the exact strength that each of the various nations would throw into the scale. We knew that Germany intended to advance by way of Belgium, and that her first blow would be struck with rapidity and with all her available force, but what has really been a surprise to us has been the bloodthirsty determination of the German host. Who for instance at the time of the battle of the Marne would have believed that 10 months later he would be reading of the fiercest German assaults in Ypres and Arras, coinciding with the throwing of fresh German reserves into the battle line in Galicia.

Let us be grateful that this has been our one surprise (if we except such things as the use of poisonous gas, which could not have been foreseen), while the poor Germans have suffered from enough to form the subject of another lecture.

To mention only one—it was a bad surprise for them to find that that “contemptible little army” could hold its own against five times its number, retire 150 miles hotly pursued, and then turn up smiling to help turn the tide at the battle of the Marne.

The cruellest surprise for Germany was the splendid bravery of Belgium and her heroic efforts which resulted in delaying the German wave of invasion until our own army and that of France were able to form some sort of a fighting line. How dearly Belgium has had to pay for this you all know and we must all remember that in the years to come whatever you do for a Belgian, and however unworthy a

being the particular Belgian may be, you cannot do enough for him. The words "I am a Belgian" should be a passport for him for all time throughout the civilized world.

Another painful surprise for the Germans has been the steadfast loyalty of India and the magnificent performances of the Indian soldiers at the front.

Amidst all the land-fighting that claims our attention day by day, let us not forget that the greatest lesson in strategy we learn from the war is the vital importance of "The Command of the Sea".

The Tactical lessons of the war are so far not very noticeable. We have chiefly learnt the excellence of our training manuals as they stood before the war—and for all this we must remember to thank our stalwart friends the Boers, for all they taught us in 1900-02.

New features are the necessity for an enormous preponderance of artillery, especially the heavier guns and high explosives, also the development which we are now attaining of a gigantic air service. The Nation however is learning many lessons, others than tactical, and surely it had much to learn.

The voice of Lord Roberts crying in the wilderness, unheeded for so many years, has now reached the ears of the nation after that heroic figure has passed from among us. Some system of Universal Liability for Service (not conscription), is certain to be shortly adopted, and let us not judge the price we have paid in the blood of our best and bravest to convince an unwilling nation that Freedom is only compatible with certain moral obligations, and that Freedom can only be attained and secured by perpetual readiness for War.

I should like to quote here some verses by Owen Seaman in "Punch" of June 2nd 1915.

LIBERTY—THE FALSE AND THE TRUE.

So when the sudden Warbolt fell,
We still kept up our games and strikes,

True to the Law we loved so well,
Let every one do as he likes.
This was a free land, none should tramp
In conscript lines, dragooned and herded,
Though some might take a call to camp
If the request were nicely worded.
And now we learn, at what a price,
And in an hour how dark and late,
That never save by sacrifice
Men come to Liberty's estate.
No birthright helps us here at need
Each must be taught by stern probation
That they alone are free indeed
Who bind themselves to serve the nation.

With all that all of us have lost and suffered, can we look on the war so far as it has gone with feelings other than those of thankfulness and pride? We have come through with clean hands, we have stood for Chivalry and Humanity.

We have to our score no records of Goebens and Breslaus, no Falabas or Lusitanias, no ruined Belgium, or other dishonourable violations of a pledged bond. At no period of our nation's history have we had as great cause for a just and wholesome pride in our nationality. The words of thanksgiving rise from my heart to my lips "Thank God I am an Englishman." Do any of our enemies from the other side of the Rhine say today, or will they say in years to come, "Thank God I am a German"?

MAACHINE-GUNS.

BY

Lt.-COL. J. C. DE K. BRUCE-KINGSMILL, R. F. A.

The British Army now appears to be composed of five distinct arms :

1. Cavalry.
2. Artillery.
3. Infantry.
4. Machine-Guns.
5. Aircraft.

While endeavouring to deal with machine-guns considered as a separate arm, we will hope to co-ordinate this arm with the others, showing at the same time that the five arms in co-operation is everything. Exact details we cannot touch upon here. The staff know best how to deal with each separate problem as it arises. We will try therefore to deal with general principles and those as we see them. Our point of view may in many places be wrong, or at least open to adverse or even destructive criticism, but in the present phase of machine gun development there must be numerous points which are still debatable.

Any statement of ours therefore that appears to be dogmatic, we will ask those experts present to consider only in the light of questions asked, which their superior knowledge and experience will readily answer.

Thus we shall get real good out of this lecture by getting established, here and now, a firm scientific basis upon which we can go to work—some to make machine-guns and some to use them.

We will therefore at the outset ask this question. "To cope successfully with the present state of war, should we not have at least one machine-gun per twelve fighting men?"

In our endeavour to prove this position, we must necessarily touch in general terms upon the tactics of machine-guns, so that we may be reminded of the many urgent duties which the machine-gun is called upon to perform in war. To enumerate the separate duties of every servant in a great department, would be of seemingly little use, *if we have not the servants*. Yet this enumeration might help to show, how necessary the servants are, if the department is to be maintained.

Machine-guns are our faithful confidential servants, and they will, if we engaged them for life-service, carry us through this present crisis in our history with a *greater economy of precious lives, of money and of material—and with enhanced glory, dominion, and power, to our King and Country.*

Major Applin in his striking book, "*Machine-gun Tactics,*" tells us that one machine-gun is equivalent to the fire of fifty rifles. But if this is so, or if the proportion is greater, taking into account the possibility that all riflemen may not be perfectly trained, then we have to ask—how many machine-guns have we at the present juncture? We believe that only two machine-guns per cavalry regiment, none per battery and two per battalion is our war allowance, and *are there any Indian infantry regiments of the field army without any machine-guns whatever? If so, then what of the rest?*

But while, in common with other soldiers, we deeply deplore the long handicap which Germany and Austria have given themselves by their wise banking of machine-guns in times of peace, yet the country should, we think, realise that the Army is in no wise to blame in this matter.

A study of the Proceedings of the Small Arms Committee since 1904, will show us how this Committee has laboured for and recommended the carrying out of certain principles regarding machine-guns.

Take one extract. "*The general and obvious conditions*

Machine-Guns.

to be fulfilled by a machine-gun are—

- (a) Reliability.
- (b) Simplicity.
- (c) Lightness.

The Germans must have got wind of the work of our Small Arms Committee, because we find them somewhat later enunciating the same principles. *But they could get sufficient money to carry out these principles—we never could.*

In Germany the army and navy come first, the church second, and the rest—later on. *So then—a nod from the Kaiser—and there are the machine-guns.*

So that although our War Office took up machine-guns about 1889, *the same spirit that tought Lord Roberts closed the national purse-strings.* And so, the wealthiest nation in the world has had to submit to being mown down by German machine-guns, a quarter of a century after the greatest machine-gunner had settled in our land. *And this is British history—the financier lives, while the soldier dies.* “Maintenant, les anglais ont change tout ça—mais un peu tard,” we can hear our allies saying; and the German still sings, “*Deutschand über alles*”—while he makes more—and still more—machine-guns!!!

When we consider how much per day our present war bill amounts to, it is easy enough to calculate, how many days expenditure would have given us a preponderating supremacy in machine-platoons over our enemies, at the outset, and have thus surely saved many *precious lives, many of the flower of our first splendidly trained army—even many whom those here have known and loved.* Still the present is the moment we have to live in, and there is not a second to be lost. It has been said that, “Men must work and women must weep,”—but now we say “*Men must work and women must work—for machine-guns.*”

An excellent article in the July number of the Journal of this Institution is worth general reading and study. But the author does not, I think, ask for *enough guns.* The

officers in high places he so forcibly appeals to, *cannot* make machine-guns without money ; but they *can* make them with money—and in India too, we feel *sure*.

I will, therefore, divide our subject into two main parts.

(I). *The description, organisation, and general tactical principles, of the machine-guns.*

(II). Our experiences in the present war, and what we find our enemies are doing.

The *second* part will deal broadly,

(1). With various suggestions, regarding the many duties of the machine-gun, as the faithful and reliable servants of all—whether it be,

- (a) *Horse-artillery*
- (b) *Cavalry*
- (c) *Artillery*
- (d) *Infantry*
- (e) *Aircraft*

so that we may see, why, all, these great arms of war must, *under the guidance of our staff*, be inseparably welded together by many machine-guns, into a great, harmonious co-operation.

(2). With a few notes on *possible* machine-gun manufacture, IN INDIA.

(3). Finance and conclusion.

(1) *Description or Organisation.*

The modern machine-gun is an automatic weapon almost automatically laid. It is capable of firing from 100 to 600 shots a minute from a light mounting of extreme mobility, and should fulfil many qualifications:

1. It should be able to deliver about 400 shots a minute without loss of accuracy, even with prolonged "continuous firing."

2. It should be capable of accompanying cavalry, artillery and infantry wherever these arms can go; it should occupy the smallest space, and be able to come into action quickly at rifle range.

Machine-Guns.

3. It should have a firm mounting, upon which the gun is steady, and from which it can be aimed rapidly and fired while kneeling, sitting, or lying.

4. The gun and its mounting must present a small target, and be light enough for each, and if possible, both, to be carried by one man for a considerable distance, and should admit of being dragged by a man crawling or crouching for short distances.

5. It should be in constant readiness for action, and able from "pack" to open fire in less than thirty seconds.

6. It should be simple, strong, and durable. Mobility and constant readiness for action are indispensable with cavalry, while lightness and smallness of target are essential factors.

There are eight main types of machine-guns at present in use in the armies of the world, viz.:—

<i>Gun</i>	<i>In use in</i>
Vickers	... Great Britain.
Maxim	... Great Britain, Germany, Russia, Italy, Portugal, Turkey, Switzerland, and U. S. A.
Hotchkiss	... France, Japan, Belgium, Norway, Sweden, Spain, and Portugal.
Perino	... Italy.
Puteaux	... France.
Schwarzlose	... Austria.
Skoda	... Japan and China.
Madsen	... Russia, Denmark (Re'kyi pattern), and China (for cavalry).
Colt	... By several countries in addition to adopted gun.

The principal differences between these guns are: (a) The automatic mechanism. (b) Method of loading.

(a) may be divided into two classes: 1. Kerr-T and 2. the Maxim, Perino, and the Madsen. 2. Gasmussen and 1. the Schwarzlose, Hotchkiss, Skoda, and Colt.

(b) consists of three classes: 1. *Belt loaders*. Maxim, Schwarziöse, and Colt. 2. *Metal clip loaders*. Hotchkiss, Madsen, Perino, and Puteaux. 3. *Hopper loaders*. The Skoda.

The Rexer gun has been purposely omitted; it only weighs $17\frac{1}{2}$ lbs., but is fired from the shoulder, and is therefore more of the nature of an automatic-rifle than a machine-gun. It would take too long to deal with each of these weapons separately, therefore the Vickers has been selected as the type with which to discuss the question of tactics.

The extreme range of this type of gun is for all practical purposes the same as the infantry rifle—about 3,500 yards, though it is more effective at the longer ranges than an equal volume of rifle fire, owing to the ease with which the firer can elevate and aim the gun on its mountings and the stability of this mounting, which causes it to have a beaten zone of only half the depth and nearly half the width of that of infantry firing the same number of rounds.

On the other hand, "rapid" fire can only be used by the machine gunner on special occasions, so that it will be necessary to compare "slow" infantry fire with "deliberate" fire from the machine-gun, in order to arrive at the mean fire volume of each. Seventy shots a minute can easily be fired "deliberately" from a machine-gun, and this could be increased to 120 by highly trained gunners, but, taking the lower figure, deliberate fire equals in volume the fire of twenty-four men using rifles. But it must always be remembered that the object of the fire fight is to bring a concentrated and overwhelming fire to bear *at the right moment* on certain positions of the enemy, and when the moment arrives machine-guns can and will use the most rapid rate of fire possible, which will be from 250 to 300 rounds a minute, or equal to that of 50 or 100 riflemen. Mere volume of fire, however, is useless without control, accuracy, and concentration, and it is here that the machine-gun is so vastly superior to the rifle; for amongst 50 men using their rifles there can only be a small percentage of good shots,

while even among the good shots, unforeseen factors, such as fatigue, bad fire positions, excitement, wrong sighting, failure to see the target, etc., cause a large percentage of the shots to go astray, and make it very difficult to concentrate the fire on any particular position of the enemy.

The result of two well known experiments show that both in accuracy and rapidity a machine-gun is much superior to 42 picked shots, whether firing the same number of rounds at known ranges or firing an unlimited number of shots in a given time at an unknown range. We shall not be wrong then, if we say that a machine-gun is at least equal to 50 rifles in fire value.

The Germans consider its fire value equal to 120 rifles. Our *Infantry Training*, 1914, gives the volume of fire from a machine-gu as equal to that of about 30 men firing rapidly; but the advantages in the way of control, accuracy, and concentration (see page 29) must be taken as rendering its fire value equal to that of a much larger number of men.

The mobility of the infantry soldier is limited to the rate at which he can march, which on the battlefield is about 100 yards a minute, or less than three and a half miles an hour. Doubling may be left out of the question, as it quickly reduces fire efficiency to a minimum.

The mobility of the machine gun will depend almost entirely on the way it is carried. We recommend pack transport in all cases with cobs or ponies. The cavalry cob must be as fast as any horse in the squadron. The artillery and infantry cob heavier and heaviest.

It is a *sine qua non* that a machine-gun must be at least as mobile as horse artillery. There is no reason why it should not be as mobile as cavalry, and the choice remains between a pack-horse with a mounted detachment or a galloping carriage; and the former is in every way preferable, principally because it can carry the gun and ammunition across any country, and can come into action in less than 30 seconds on an adjustable tripod, which can be carried by

hand into any position and presents a very small, inconspicuous target.

The majority of foreign countries have adopted pack transport for their machine-guns. It is desireable with infantry and absolutely essential with cavalry and artillery.

The Swiss and the Americans have permanently adopted pack transport for the machine-guns with their cavalry, which are able to accompany them over any country without detriment to either horses or guns; and in the American Army the average time for a well-trained cavalry machine-gun detachment to go into action front, from mounted formation, unpack, and set up the guns, load, aim, and open fire, is 25 seconds; while at the departmental meeting for 1908 the machine-guns of the 10th Cavalry, from the halt in line, *moved forward in section column at a gallop for 200 yards and went into action and fired a blank shot in 31 seconds.**

Infantry will never again fight in two ranks in civilised warfare, and the closest formation possible for a firing line is one pace per man; 50 men will therefore occupy a front of roughly, 50 yards; in other words, the target presented to the enemy, is 50 yards in breadth, and, provided the elevation is correct, shots striking anywhere within this 50 yards will be effective. The machine-gun, however, only occupies a front of from 4 ft. to 5 ft. 2 in., or one-twenty fifth *the front offered by infantry having equal fire effect.* It is on this point that the wonderful tactical possibilities of the machine-gun rests: *the maximum of rifle fire from the minimum of front.*

We are now in a position to form an accurate estimate of the potentialities of the machine-gun and its true tactical value as compared with infantry, and we find:

1. Its fire effect is equal to that of 50 rifles at least.
2. Its mobility is the same as that of Cavalry.
3. Its visibility is that of a file (2 men).
4. Its vulnerability is unaffected by 50% of loss.

*Journal of U. S. A. Cavalry Association, July 1909.

Machine-Guns.

The best and nothing but the best is necessary to the successful employment of machine guns, and the importance of obtaining the very best officers as section commanders is so great that there is reason to doubt the utility of having machine-guns at all if they are not commanded and handled by experts.

The mechanism of the Maxim is somewhat complicated and delicate, and depends for its proper working upon the exact adjustment of each part; but no more so than any other piece of modern machinery. It is far less complicated and certainly far less delicate than the modern motor-car. Indeed, the comparison is analogous in several respects, as both require highly trained operators to ensure their smooth and continuous working, and each individual machine, whether gun or motor, has its own peculiarities and requires special study to obtain the best results.

As the gun is generally required to move and come into action independently of other troops, it must find its own scouts, who not only have to safeguard it from surprise when moving, but must be trained to select good positions whence it can come into action.

With the tripod mountings and pack transport the best *working* strength for a machine-gun section will be found to be the following:—

1 officer, 1 sergeant, 2 corporals, and 24 privates, that is, 1 N. C. O and 12 men to each gun. 8 men for the infantry is far to few, the scouting must suffer.

A modern machine gun in the hands of experts should never jam, while failure of automatic fire will be rare and momentary. Until this standard has been reached a machine-gun detachment cannot be considered fit to begin tactical training.

Captain Matsuda writes: "Whereas at the battle of Pensi-heu on October 12th 1904 we had some trouble after firing 1,800 rounds, on March 3rd 1905 the guns of one section after firing 11,000 rounds continued to work perfect-

ly. *The gunners were absolutely familiar with their weapons.*" Lieut.-General Sir C. J. Burnett, K. C. B., remarked: "Like a good chauffeur, the Japanese machine gunner knows all the peculiarities of the weapon he fires and can tell almost by instinct when anything is going wrong."

No drill for a machine-gun battery appears to have been finally authorised yet, but the simple formations of a troop as laid down in *Cavalry Training* will be found admirably suited for a battery of machine-guns on pack-horses with mounted detachment.

The Germans, who have studied the question of machine-guns with a thoroughness far greater than that of any other nation, have made them a separate arm of their service, under trained and permanent gunners, and they evidently consider that only specialists can attain the necessary efficiency.

Infantry.—It is rapid fire delivered in sudden powerful bursts, with intervals of complete silence, which characterises the fighting of British infantry, the unit which delivers the burst being usually the section of 12 to 14 rifles or the platoon of 50 to 55 rifles.

It is safe to say that our rapid fire when it displayed its powers for the first time at Mons, astonished Europe as thoroughly as Frederick the Great's volleys astonished the Europe of 1740, or Wellington's the Europe of Napoleon. Fire assists movement. The French and ourselves seek by means of manoeuvre and fire combined to advance as near the hostile position as possible, using momentary bursts of intense fire to facilitate the approach to bayonet-charge distance.

Now the machine-gun is the machine platoon, and no more infantry appear to be necessary for the taking of a position than those who work the machine-guns and those who creep up to clear with the bayonet what of the enemy is left by these machine-platoons. *Thus it is that an increase in machine-guns must mean a greater economy of infantry in the field and thus a greater diminution of casualties.*

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Now to us at this supreme moment in our history an ever greater economy of trained men is necessary and thus comes about our contention that an unlimited manufacture and supply of machine-guns is vital to our co-maintenance of this just war unto a great, glorious and ultimate victory.

Although at the outside we suggested a possible future of one machine-gun to every twelve fighting men in the field yet it is obvious that we cannot reach that ideal for some little time to come, even if the principle thereof were accepted to-day. In the meantime however it seems to be urgently necessary that we should have and have at once:—(all batteries being each of four guns)

- (a) a section of two machine-guns to every squadron of cavalry and to every (double) company of infantry with two sections per regiment and battalion spare. These machine-guns should never be taken away in the field from the units to which they are attached. They would of course belong to the Corps of machine-gunners, should such be formed, and would wear their own distinctive uniform or badge.
- (b) Three or four batteries to every cavalry and infantry brigade, in addition to the "regimental" machine guns mentioned in (a). These might be called "brigade" machine-guns.
- (c) Six or eight batteries of machine-guns to every Cavalry division to be known as "Cavalry divisional" machine-guns.
- (d) Twelve or fourteen batteries to every composite division to be known possibly as divisional machine-guns.

In this way squadrons, companies, and regiments will always have their own machine-guns with them whatever they may be doing.

In like manner the brigade and divisional commanders

will always have their reserve of machine-guns in their own hands, as a powerful reserve of fire to support any portion of their command at critical moments of the fight.

But we propose to go a step further. We would also attach a proportion of the Corps of Machine gunners to the Artillery. This is a delicate step, but we think it is justifiable. It is really an appreciation of the magnificent work which artillery has done in the past and is now doing before our eyes—on the many battlefields of France, Gallipoli, Mesopotamia. Should time allow I will endeavour to suggest some reasons for this proposal. But they are debatable, and may be put aside by those who know better than I. One thing however is certain—that if it costs 2½ lakhs per annum to maintain an 18 pounder battery in India, that battery must be protected from all comers, not only by its own guns, but by all arms at our disposal—and at all times.

A large reserve of machine-guns is necessary in addition to those previously mentioned. Barrels and bodies have to be replaced at a short notice like any other weapon which is worn down. Guns may fall overboard, may be captured, may be blown up by artillery—and so on. But no machine-gun can stand, once, *it is located* by artillery. If the machine-gun is the torpedo boat, artillery is the destroyer.

What the enemy is doing.

The following points are reported regarding the newest German machine-guns.

There are three types:—

- (a) *Model*—weighing 21 lbs.
- (b) *Experimental*—weighing 23 lbs, air cooled.
- (c) *Service*—weighing 25 lbs, water cooled.

Fire from shoulder. Three men appear to carry the gun ammunition and fittings into action.

One carries the gun stand and spare parts, the other men carry 500 rounds of ammunition each. The gun-carrier is loaded like a sandwich man. He has his gun and kodak tripod hung in front and his box of spare parts to balance them behind.

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The water-cooled gun fires 700 rounds per minute and boils one gallon of water in $1\frac{1}{2}$ minutes. If air cooled it can only fire 400 rounds per minute. Thus the water-cooled gun evaporates 110 lbs of water per square foot per hour at its highest rate of firing. The best high-pressure boiler now in existence (such as the Thorneycroft or Niclausse) only evaporates 14 to 16 lbs. per square foot per hour. But an ordinary marine boiler only evaporates 10 to 12 lbs. per square-foot per hour. Thus this machine-gun evaporates about 8 times as much as the highest class high-pressure boiler in existence.

The German gun carries about 20% more ammunition than we do, even with our new belt of 250 rounds. Its maximum range is 2,500 yards. It can be tapped to a spread of 14 and fired off a man's chest. The Germans have 12 of these guns per battalion against our 2 per battalion.

They go in much for night-firing by clinometer-sweeping the roads up to a range of 2,500 yards up which our transport is expected to be moving. We have not enough guns at the front to do this. But this German gun drinks up so much ammunition that in two minutes it is dry.

German cavalry are using these guns in profusion. A few files can gallop up, and without dismounting, blaze away at us from the chest, or they can halt, unpack and fire in about 25 seconds.

Every man in a German machine-gun company is an expert in the gun. Each gun is considered to be worth 50 men or more. Their fire is considered to be the most valuable form of discharging bullets, and an enormous amount of time, trouble and ammunition has been spent on training to this end. The following is a brief summary of some important notes which have reached us from the various fronts. A few comments have been added.

Machine-guns. Machine-guns have played a very important part in the war, and the German is adept in making use of their surprise effect, which has been found to be very

great indeed. Till they are located and engaged machine-guns play havoc with troops in close order, but when located they are easily *knocked out by artillery fire*, or silenced by a *concentrated rifle fire*. Great care should therefore be taken in selecting the positions for machine-guns, in occupying them without attracting attention and in reserving fire till a suitable opportunity arrives, in order to make full use of their surprise effect. The only way to avoid the surprise effect of the enemy's machine guns is by careful reconnaissance.

The German method of advance is to show a front with cavalry, in close contact with which is a highly mobile force of Jaegers conveyed in motor lorries and accompanied by machine guns. When attacked, the cavalry calls up the Jaegers who deploy behind the cavalry screen. The cavalry then withdraws, and the allied cavalry finds itself confronted by an infantry force with machine-guns.

The German gun as it rests on the ground is about the height of a man in the firing position lying down. When raised it is about the height of a man kneeling. A spectator saw 50 of these guns loaded into small two-wheeled carts and into motor trucks, which are mentioned later; the operation of loading took less than 35 minutes. As they passed through a town no one would have detected from any evidence that any machine guns had been taken through the streets. The machine gun is sometimes carried in the manner of an African hammock on the shoulders of bearers. They move it also carrying it as they would a stretcher with a blanket thrown over the gun and a couple of knapsacks or perhaps an ammunition box; when carried in this manner the gunners at a distance are easily mistaken for stretcher-bearers carrying a wounded man off the field.

They also have a two-wheeled cart which is fitted to transport three of these guns. They have two men to every gun. The driver and another man ride on the seat, and each cart is accompanied by a mounted non-commissioned officer or perhaps subaltern.

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The members of this mobile machine-gun force march light, their knapsacks, blankets, and in some cases their rifles, being carried in the carts. The mounted men that accompany them have a rope and leather harness, so that the horse can be used as the leader of a tandem in case of heavy going. The cart has strong and steady springs. The appearance of the cart with its load of, in some cases, bundles of forage, knapsacks, haversacks and blankets, would attract not the slightest attention. The guns at the bottom were absolutely hidden. The cart is somewhat like an English butcher's cart, only much heavier. The tail-board drops down in the ordinary way.

In regard to the *motor vans*, they carry *nine guns*. The vans have evidently a shallow false bottom. This is very carefully concealed, so carefully indeed, that it is said that some of these lorries have been captured and *lost* without the guns having been discovered by the captors. A small tail-board, which drops down, facilitates the guns being hauled out or replaced. A heavy load is placed on top of the false bottom. The sides of these motor vans are quite high, and in many cases machine-gun detachments of no less than 15 or 16 men were carried on a van.

The use and mobility of machine-guns carried in this manner is, of course, apparent. They are always up with the regiment, and can be taken over any ground without difficulty to support an advance or cover a retreat. Moreover, if necessary, they can be concealed from falling into the hands of an enemy by digging a shallow grave, wrapping the gun, etc., in a blanket, and covering the whole with a few shovelfuls of earth. Machine-guns have actually been found buried in this manner. It is understood that the wooden cross marking their sites had a slight distinguishing mark.

The German machine-guns are used in the attack with boldness and cleverness; they are pushed up close to the hostile trenches, and in this manner sometimes prepare the way for the infantry attack. They are often used in con-

junction with snipers, or in large numbers against one or both flanks of the portion of the position which it is intended to attack. They usually cross their fire, which makes them difficult to locate from the portion of the trenches opposite them. One attack was carried out *solely by machine guns*. The trench was engaged from a flank by six or seven guns, while *other* machine guns succeeded in working round and enfilading the position.

The exact range is usually obtained by opening bursts of fire as soon as a suitable fire position has been occupied, after which the Germans satisfy themselves by preventing the defenders, as far as possible, from showing above the parapet, thus enabling their own troops to approach in security. The closer they can approach a trench, the more oblique becomes their fire. The duration and volume of the fire depend on the ground over which the advance of their own infantry has to be made, but they are careful to husband their ammunition, as the ammunition supply is the chief difficulty with these guns.

When the advance of their own infantry has passed the machine-guns, the Germans try to place the latter in positions whence they can assail the enemy as he retires from his trenches, or, alternatively, in the event of a counter-attack to open fire in such a way as to allow their own infantry to withdraw.

When we consider the historic landing in the Gallipoli Peninsula we are reminded that the beach was apparently deserted. Suddenly from nowhere, came a raking fire of machine-guns which wiped our people out. *A machine-gun can be hidden where nothing else can.* Then in East Africa, we all know the use which the Germans made of machine-guns.

Horse and Field Artillery.

There is one important duty which machine-guns are able to perform better than any other arm, and that is escorting artillery, but more especially horse-artillery. A

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section of machine-guns might be allotted to each battery of artillery when an escort is necessary. They could march in the rear of the battery when on a road, and on the outer flank when in open country and away from cavalry. The sole object of the machine-guns is to afford protection to the battery from cavalry, and to prevent rifle fire from being brought to bear on them from effective range. Therefore the section commander must devote his whole attention to this object, and he is not justified in opening fire on any target that does not directly threaten the battery—this especially applies to horse artillery in that stage of the mounted combat immediately before the collision, when the guns are firing on the opposing squadrons.

The section commander will be under the immediate orders of the battery commander, and should be acquainted with his plans and intentions. He should remain with him until the position for action has been selected, when he will immediately seek the best position from which to cover the guns, taking particular care not to mask or limit their radius of fire nor hinder their line of advance or retreat. Machine-guns have nothing to fear from cavalry under any circumstances, and when in a selected position with ranges accurately known, a single gun properly handled could easily stop a squadron.

Artillery as it fights at present does not always need an escort. But if ordered to take up a position on an exposed flank, it does. Is an escort always available when artillery wants it? True that infantry will always give artillery what they can? *They always play up.* But they cannot often spare much on sudden demand—say a couple of platoons or so—say 100 rifles. Let us place these 100 men on the exposed flank of a battery and imagine a cavalry rush just beginning say at from 800-1000 yards. The cavalry will be opened out, the second rank about 100 yards behind. Supports will follow up at selected points, but no closer than 300 yards.

Normally the second rank receive no shock. Their

function is to fill up the shrapnel holes in the front rank and to sabre. But they cannot charge home against machine gun fire. If our infantry are to resist a cavalry rush they must be in the narrow front of two ranks. One rank is no good. But cavalry do not love a face-to-face attack. They have reconnoitred, and they will take our infantry escort on flank if possible, if not, never mind. Infantry fire cannot be made rapid enough to stop cavalry. 15 aimed shots per man per minute will not stop cavalry, racing on from 800 yards. Horses and men will fall, but their places are rapidly filled—and on the cavalry comes. But then there is the bayonet? Cavalry will never be stopped by the bayonet. The pace they can go at must smash up infantry. No physical object can stop cavalry except a burst of machine-gun fire. Hence, is not the machine-gun a better escort for artillery than infantry?

But if imagination takes us a bit forward in our fighting history and if artillery then often fights in smaller or section units, covering a target with bursts of fire from well hidden cover; and if, when its range is found, it moves sharply away to one of its several alternative positions, then even more than to-day, the machine-gun must surely be its protective escort?

Cavalry Training—1912 reads (on page 229). "The extended formations adopted by the infantry, and the exhaustion entailed by the continued strain of battle combine to render artillery and infantry, peculiarly susceptible to sudden and unforeseen attacks by mounted men." Again (on page 282) we read: The attack against artillery should be made on one or both flanks of the line of guns in extended order. A portion of the attacking force should be detailed to attack the gunners when the guns have been ridden through. Other portions should be detailed to deal with the escort, limbers and horses. The limbers and horses are very important and should be seized as soon as possible." No mention is made here of the cavalry machine-

guns. But as the cavalry must *first* be armed with our new increase in machine-guns, the gunners will have a new foe to contend with—a foe who is always fresh. And so all cavalry-attack on artillery will thus be stiffened with a hot machine-gun fire—our artillery must have their *quid pro quo* in a sufficiency of machine-guns which are always available to meet the worst. This is another argument in favour of each battery of artillery having attached to it a section of the corps of machine-gunners in addition to possible reserves under the immediate hand of the artillery Lieut. Colonel and of the C. R. A.

Now there comes a moment in the fight when protective artillery fire must cease. And this moment might well come earlier than at present. When friend cannot be distinguished from foe and the errors of the gun and fuze make it *doubtful* if firing can be continued over the heads of our infantry; then the artillery machine-guns on the word of the Commander Royal Artillery can gallop forward and act as mountain artillery are now doing in France only without being ordered to retire from the captured position. Then in co-operation with the infantry machine-guns, these machine-guns of the artillery may form a wall of protection against all possible counter-attack.

Machine Gun with Aircraft.

The following seem to be the most important duties of aeroplanes in war—

- (1) Reconnaissance.
- (2) Destruction of hostile aircraft, both airships and aeroplanes.
- (3) Attack of troops on the ground.
- (4) Destruction of material, such as airship sheds, oil tanks, magazines, etc.

The first and fourth headings are outside the scope of this paper.

The second and third necessitate the maintenance of a fleet of machine-gun carrying armoured aeroplanes. At least

one machine-gun per aeroplane might be carried by this fleet. But as the carrying power of aeroplanes develops as it is fast doing at the present time, two machine-guns even more may not be unusual. The reliable engine having almost come, nightflying will be much resorted to; and for night-flying the machine-gun is invaluable, as it protects the aeroplane during a forced landing on unknown ground.

Even before the war broke out, it was proved possible to fire a rifle, a machine-gun, and even a one-pounder gun from an aeroplane with fair accuracy. This principle is now fully established, so that a purely reconnaissance aeroplane might be accompanied by a fighting aeroplane, so that temporary local command of the air over the locality to be reconnoitred, is secured. Armed and armoured aeroplanes may have to attack one another on a lower level than the purely reconnaissance aeroplane, because the additional weight they carry entails both loss of speed and climbing power.

In the attack of airships, the average aeroplane is faster than the average airship. The aeroplane can fly faster, climb higher, and is easier to manoeuvre than the airship, while the airship can climb faster, and provides a steadier platform for a heavier armament than the aeroplane.

Airships may try to keep aeroplanes at a distance by virtue of their possible power of delivering a more accurate fire, while aeroplanes will endeavour to *close*, in order to make use of their manoeuvring power and to obviate any comparative inaccuracy of their fire. It may be necessary to employ several armoured machine-gun aeroplanes for the attack of one armed airship—one or two to destroy the personnel and stop its fire, while the others destroy the envelop, exploding its gas; but even one machine-gun aeroplane should under favourable circumstances explode the gas of an airship by its gush of fire—and that at some distance.

Then there is the desperate work of a fast aeroplane (even unarmed) catching and ramming, or driving through the airship. The combat between two aeroplanes is more

Machino-Guns.

difficult. Each will manoeuvre so as to prevent his opponent using his machine-gun to the best advantage. If one aeroplane tries to avoid the other, speed will be the determining factor; but the pilot who decides to flee, will present the best possible target to the pursuer.

The personnel of anti-aircraft guns can be well attacked by machine-gun aeroplanes, leaving the bomb-carrying aeroplanes of the squadron to deal with any hangars, magazines oil tanks etc. they may be protecting. Anti-aircraft guns on land should therefore have at hand their own machine-gun escort to protect them; and thus we see that the work of this class of gun also, could be increased by the help of the machine-gunner.

Machine-gun aeroplanes are invaluable in completing the demoralization of a beaten army. Co-operating with the pursuing horse-artillery and cavalry (with its numerous machine-guns) the reformation of a beaten army should be well-nigh impossible. Machine-gun aeroplanes could fly on the van of the beaten army—and wheeling round, catch it on its only free side, co-operating of course with many flanking aeroplanes. Under such circumstances, *vae victis!* indeed.

We have tried a Rivers Vickers gun with aeroplanes. This gun is air-cooled and weighs about 27 lbs. Our water-cooled gun seems ill-adapted to the air-fight, as after firing about 2000 rounds the steam-haze obscures the foresight.

Other things being equal, the gun-carrying power of aircraft seems closely linked up with its engine-power. But if engine-power is large, weight may be seriously increased. The weight of our aircraft-engines appears to run from $3\frac{1}{2}$ lbs. per horse-power to under 1 lb. per horse-power.

It is recently reported that when reconnoitring over P. at a height of about 4000 feet, two officers R. F. C. engaged a large German-biplane having a double fuselage, two engines and a pair of propellers. The German machine was armed with a machine-gun. Our officers drove him out of the fight.

On July the 19th Mr Tennant is stated to have informed the House of Commons that there was no evidence that the new German multi-engined aeroplanes carried guns larger than machine-guns. If this is so, then the Germans have adopted our views.

Notes on the possible Manufacture of Machine-guns in India.

Mr. W. E. Hackney in a paper read before the Institution of Civil Engineers in 1911 tells us **Crucible Steel** that fusion in crucibles is the simplest and oldest form of making steel, and has been practised by the Hindoos from a very remote period. In the Hindoo process a small quantity of wrought iron, from $\frac{1}{2}$ to 2 lbs. either in one lump or cut to pieces, is put into a crucible of unbaked clay, together with one-tenth of its weight of dried mould, the whole being covered with one or two green leaves and luted over. From 14 to 24 of these small crucibles are stacked together when the luting is dry in the form of a dome or beehive, an opening being arranged by withdrawing one crucible from the lowest row, to form a firing hole. Fire is lighted inside the dome of crucibles, and the inside space is filled with charcoal, which is also heaped over the top. The fire is urged by bellows, the blast being introduced into the fireplace by a clay pipe. and in from $2\frac{1}{2}$ to 4 hours the operation is completed. The resulting steel is called "*woots*." It is reheated, cooled down and drawn out at a very low red heat.

Mr. Henry tells us that a forged bar of "*woots*" which he analysed contained:—

Combined Carbon	...	...	1·333%
Un-combined ,,	...	...	0·312%
<hr/>			
	TOTAL	...	1·645%

or nearly the maximum quantity that is found in any metal that can be classed as steel.

Thus the plan of melting soft malleable iron with carbon is the old Hindoo process. A modification of it was patented by David Mushet in 1800. Sharp in his "Modern Foundry Practice" says that in modern practice if the pot-metal is a little too low in carbon, nothing is more common than to add a small quantity of charcoal.

Crucibles. Pots may be made of fire clay, mixed with a little coke dust. They are then annealed. The bazaar chatty-maker should be able to give a hand in this.

Steels. Steels may be classified as follows:—

"High Carbon Steel"

- (1) *Hardest* (1-8 to 1-5% carbon).
- (2) *Edge Tools*, chisels etc. (1-5 to 1-3% carbon).
- (3) *Files and Sword Blades* (1-3 to 1-1% carbon).
- (4) *Tool Steel* (1% carbon).
- (5) *Finer Springs* (0-9% carbon).
- (6) *Coach and Buffer springs* (0-8% carbon).
- (7) *Axes, plates and general purposes* (0-7 to 0-4% carbon).

Thus we appear to be able to make in India the steel for all parts of a machine-gun whether barrel, lock, springs or casing.

In the "Text Book of small arms," 1909, pages 120 and onward, we read that in the trade "Cast Steel," "has come to be identified with

Manufacture of Components. steel made, by a special process, in small quantities in crucibles." This is the original Hindoo process. "For the barrel the steel must be of a high quality," and "greater strength is required of it in its mechanical tests than would ordinarily be the case with mild steel."

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Manufacture of Gun-powders

In the "Tex Book of small arms," 1879, pages 120 and onwards, we read that in the trade "Cast Steel" has come to be identified with steel made by a special process in small quantities in crucibles. This is the original Hindoo process. For the barrel the steel must be of a high quality, and greater strength is required of it than its mechanical tests than could ordinarily be the case with mild steel.

High carbon steel is employed for the bolt, breech piece and seat of a gun, as they have either considerable pressures or wearing surfaces to contend with. For the barrel re-

taining spring for bolthead, or sear spring a special quality "high carbon" steel is required. For the minor components, trigger-guard, nose cap, screws, etc. a lower grade of mild steel is employed. For the bolt-head and stock-bolt a steel just above wrought iron is used. Similarly for the machine-gun, the steels used can be produced in India.

But now we are faced with another suppositious difficulty — that of gauges. We read again

Gauges. in our Text Book on page 124, "the machine hands are provided with gauges by which they can check the work being produced, and bring to notice the necessity for re-adjustments of the machine, or for tool sharpening." Gauges of a higher order of perfection than these are in the hands of qualified fitters and another closer gauging is performed by an independent staff. The making of gauges calls for exceptional skill, and their high price is commensurate with the degree of accuracy required. The Inspection Department keep a special set of standard gauges for checking the working gauges.

Thus we see that several hundred gauges may be put into use before we can hand you a finished machine-gun. It is believed that the Mathematical Instrument Office at Calcutta can work to a very high degree of accuracy to .0005 of an inch or even close to "dead."

Could that office not be approached for our gauges? But if not, and there happens to be no firm in India which can work really close from working drawings, can someone not be sent home, borrow a machine-gun working drawings, a set of gauges, and speed back? In the meantime preparations could go on vigorously for the use of factories, enlisting of highly trained men etc. Then too, the crucible-steel could be in the making, and blanks of the various parts of the machine-gun stacked up in store.

In summing up this subject of the manufacture of machine-guns in this country, we put this question—"Can anyone prove that machine-guns CANNOT be made in India!"

Machine-Guns.

Thus the plan of melting soft malleable iron with carbon is the old Hindoo process. A modification of it was patented by David Mushet in 1800. Sharp in his "Modern Foundry Practice" says that in modern practice if the pot-metal is a little too low in carbon, nothing is more common than to add a small quantity of charcoal.

Crucibles.

Pots may be made of fire clay, mixed with a little coke dust. They are then annealed. The bazaar chatty-maker should be able to give a hand in this.

Steels.

Steels may be classified as follows:—

- (1) *Hardest* (1-8 to 1-5% carbon).
- (2) *Edge Tools*, chisels etc. (1-5 to 1-3% carbon).
- (3) *Files and Sword Blades* (1-3 to 1-1% carbon).
- (4) *Tool Steel* (1% carbon).
- (5) *Finer Springs* (0-9% carbon).
- (6) *Coach and Buffer springs* (0-8% carbon).
- (7) *Axes, plates and general purposes* (0-7 to 0-4% carbon).

"High Carbon Steel"

Thus we appear to be able to make in India the steel for all parts of a machine-gun whether barrel, lock, springs or casing.

Manufacture of Components.

In the "Text Book of small arms," 1909, pages 120 and onward, we read that in the trade "Cast Steel," "has come to be identified with steel made, by a special process, in small quantities in crucibles." This is the original Hindoo process. "For the barrel the steel must be of a high quality," and "greater strength is required of it in its mechanical tests than would ordinarily be the case with mild steel."

High carbon steel is employed for the bolt, cocking-piece and sear of a rifle, as they have either considerable pressures or wearing surfaces to contend with. For the cut-off, re-

MECHANICAL TRANSPORT FOR MILITARY PURPOSES.

By

LIEUTENANT L. J. MARTIN, B. B. & C. I. Ry.

History has proved conclusively that war begets war and in consequence the Utopian idea, that the present war will be the last war and that all future international differences will be settled in a court of arbitration, is bound to remain merely an idea. It is an inevitable law of nature that the weakest must go to the wall and nations obey this law in all its harshness. No nation can stand still or mark time; for a nation to live, it must be in such a condition of preparedness to protect its rights and fulfil its obligations, as to minimize the probabilities of any other nation challenging them. In other words we need not be warlike but we must be for war prepared.

The matter of mechanical transport in the future must have the very closest attention. We have only recently learnt what an important branch of the service it is, and the experience we are now gaining will not be dearly bought, if we learn and obtain the full benefit from it.

I need scarcely mention that for some years the War Office has been subsidizing those motor lorries which conform to a certain specification. This specification though very definite on some points was extremely elastic on others, and made no effort to obtain an absolute standard type. It was more of a negative standard in that it was very clear in stating details of design which, if incorporated, would debar the vehicle from enjoying the benefits of a subsidy. At the time when the scheme was introduced, many engineers were of an opinion that the specification should have been more rigid, and in fact it should have been a detailed specification ensuring one standard type.

I cannot agree with this view as, at that time, the motor lorry was not so highly developed as it now is, and the merits of many details has not been fully tried.

Finance Conclusion.

Now as to finance. Every new man MUST effect a SAVING. Our machine-gun costs about a hundred guineas complete.

Mark VI .303 ammunition costs some four guineas per thousand.

Mark VII ammunition does not concern us, as it is not made in India. But (in confidence) it costs a guinea or so more.

One machine-gun is worked by two men. Its effect is equal to that of fifty men. So we save the keep and clothing of 40 men for every machine-gun. Now if the upkeep of a British infantry soldier in India in peacetime, is Rs. 110 per month, the net economy to the Government is over Rs. 4,400 a month, allowing 10 men per machine-gun detachment. So we CAN afford to raise the detachment to 12 men and still effect a large economy. But we must not forget to deduct Rs. 130 per month for interest on the gun at 5%. Then we are saved the cost of 38 to 40 rifles as well.—capital and interest. Similarly, for the cavalry,—but greater, as the horse saving fails to be added. Then the lives-bill is greatly reduced. All lives are costly.—SOME ARE PRICELESS.

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I cannot agree with this view as, at that time, the motor lorry was not so highly developed as it now is, and the merits of many details has not been fully tried.

At present all kinds of motor vehicles are being employed in conjunction with subsidy type vehicles, with the result that no real benefit is now obtained from the undoubted influence that the subsidy scheme exercised. The invaluable service rendered by this conglomeration of types has not been without its limitations and drawbacks. To obtain an efficient service it has been necessary to establish repair depots for each individual type, and the entire absence of interchangability has given endless trouble. I am convinced that a standard type or types will have to be evolved with absolutely interchangeable parts.

It is therefore necessary to first decide how many types of vehicles are necessary. The most clearly defined types are enumerated below:—

- (1) The motor cycle.
- (2) The light car.
- (3) The powerful touring car.
- (4) The lorry.

I will deal with each one separately and endeavour to indicate the purpose for which they will be used and the points in their design which should receive special attention.

(1) THE MOTOR CYCLE.

This is primarily intended for the conveyance of one man over moderate roads either for despatch carrying or reconnaissance. Being a mono track vehicle it has no natural stability and this absence of stability limits its sphere of action. On wet muddy roads it is unmanageable, and the rider is always unprotected both against the weather and the enemy. While in motion the rider can neither offer any defence against an attack, nor can he take notes of any observations he may make.

Further the machine can only propell itself in one direction. Although there are many makes of motor cycles, actually no two parts of any two different makes are alike either in design or size. On account of his mobility the motor

cyclist may start from a depot and not return to it for a long time, in the meanwhile visiting several other depots. Unless all the depots are equipped with spare parts for all the various makes, it is not difficult to imagine any one particular motor cycle held up at any depot for the most simple part, until such time as it can be sent from some other depot.

As the motor cycle is of already advanced design, I would advocate only one standard type being adopted. By rigid standardization it would enable a lower priced motor cycle to be produced and the advantages of maintenance both in peace and in war conditions are obvious.

In selecting the design, certain issues will have to be decided and the requirements of a large system must not be confused with the demands of the private owner. The power unit should consist of a single cylinder, four stroke, air cooled engine of about $3\frac{1}{2}$ " bore, with which should be incorporated a gear changing device. This unit should be readily detachable from the frame and the control connections should be so devised as to facilitate this detachment. The final drive to the back wheel should be by belt and both wheels should be interchangeable and capable of rapid detachment. It is for this reason that I advocate the belt drive.

The frame should be so designed as to enable a side car attachment to be bolted on. This side car framing should also be standardized to enable either a machine gun, a stretcher, a passenger seat, a stores box or any other fixture to be attached to it that may seem desirable. These side car attachments should further be so designed as to enable them to be nested for packing and transport.

By this system any motor cyclist arriving at a depot could have his machine rapidly converted into the type of side car required, and again shed his outfit at any other depot. If it was found that these outfits were accumulating at one depot and that another depot was running short, a batch of them could be despatched to make up the deficiency.

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(2) THE LIGHT CAR.

In dealing with light cars I shall probably tread on the corns of several manufacturers whose only claim to light weight for their productions must be confined to their pistons and connecting rods. Their products as a whole are distinctly heavy, but they are quite happy so long as the cubic capacity of the engine comes within the limits laid down by the automobiles competition authorities.

Assuming a really light weight car capable of production—and it is—its uses for military purposes are many. Apart from its suitability to carry moderate loads, as a unit in a transport column it can be taken nearer the firing line than the heavier and more cumbersome motor lorry. Munitions can be deposited nearer the guns and the light car is well suited for the conveyance of the wounded. Moreover the light car is capable of negotiating fairly difficult country. If mounted with a machine gun it becomes a useful unit for skirmishing in the open.

For the light car I would also recommend a rigorous standard type, the car to be as light as possible consistent with strength. The engine should be capable of about 15 B. H. P. at 1000 revolutions per minute, which engine speed should correspond to a road speed of 20 miles per hour on the direct drive. Provided the weight of the complete car is kept below 10 cwt, this should provide sufficient reserve power to carry two men and a freight of 5 cwt over the most difficult roads, even if the engine were not in the pink of condition.

This latter qualification is important, as the "light" car of today has very little, if any, reserve of power and any lack of tune in the engine has a marked and immediate influence on the performance of the car.

The detail design of the chassis need not be discussed here. The defects of the present light car engines, namely liability to over-heat, excessive lubricating oil consumption and

sensitiveness to slight lack of adjustment must be carefully guarded against. I would recommend equal sized detachable disc wheels in preference to the many other varieties for convenience of dealing with tyre troubles. If these cars are designed to maintain a moderate average speed on heavy roads, rather than to be capable of high speeds on exceptionally favourable roads, tyre troubles should be few and far between and the life of the tyres would be satisfactory.

For stability over rough country the track should be about 4 ft. 8 ins; the present normal light car track is 4 ft. The wheel base should be curtailed as far as is consistent with the provision of the necessary accommodation, as the shorter the wheel base the more easily can the car be manœuvred in confined areas. Without resorting to abnormal sized wheels, the road clearance should be at least 10 inches, and no part of the car should infringe this dimension.

The body design must depart from the accepted type which provides luxurious accommodation for two in a reclining position. Apart from the discomfort of this position on really bad roads, it encroaches too much on the available body space, in fact it leaves none available for any other purpose. Assuming a wheel base of 8 ft, the back of the driver's seat should not be more than 4 feet from the front wheel centre. This will provide a clear space nearly 6 ft. by 4 ft. wide for carrying the various types of loads. Without resorting to a glass wind screen, it should be possible to provide adequate weather protection to the occupants of the seat, provision also being made to extend this protection to the rear platform.

It is not my intention to enter too closely into mechanical details of design, but I would strongly recommend that the light car type should be built with a solid back axle and that the differential be abolished. At its best the differential is mechanically incorrect and for large and heavy vehicles it is merely a compromise with distinct limitations. Its theoretical function is to enable the outer wheel to over run the inner wheel when turning a corner. In practice it does this

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but transfers the drive to the inner wheel. Another disadvantage and by far the more serious one is, that should one wheel fail to obtain a grip on the road surface owing to mud or sand etc, no drive is transmitted to the other wheel, and the slipping wheel continues to spin round idly, while the car remains stationary. The only disadvantage to the solid axle is that it causes a certain amount of wheel slip when rounding corners. This disadvantage is, I maintain, more than compensated by the advantages obtained from the rigid drive, quite apart from a facile design and reduction in cost of production.

The engine should be capable of being started from the driver's seat, preferably by some simple link work. If this is well carried out there is no necessity to provide for the stereotyped starting handle, the absence of which will enable considerable improvement and economy in design to be effected. The probabilities are that more of this light car type of vehicle will eventually be employed than any other, and for this reason the question of economical production should be most carefully considered. Its relative ease of manœuvring in confined areas and its ability to traverse "soft" country, place it easily first on the list for general utility. Another advantage which must not be overlooked is the reduction in "unit loss".

By "unit loss", I refer to the loss entailed by the inability of the vehicle to reach its destination, which inability may be caused either by mechanical defect or by damage from external sources. A car carrying say 5 cwt, if put out of action means only 5 cwt less supplies arriving at their destination. The same shell hitting a 3 ton lorry means 3 tons less arriving and the liability to be hit increases as the square of the size of the unit, or roughly the carrying capacity.

Another way of looking at the same problem is to imagine two detachments each of 30 men being sent from different bases to a particular point. Detachment A is carried in one motor lorry, while Detachment B is conveyed in six light

cars each carrying five men. The chances of *some* men reaching the destination are 6 to 1 in favour of detachment B, while there is a possibility that none of detachment A will arrive.

As an addition to the light car, the two wheeled trailer should be considered. There will always be conditions under which a trailer could not be used, but there are many possibilities for its use, which increase the effective "transport" capacity of the light car nearly 100% with only a slight reduction in average speed. Such trailers are already being used for the conveyance of "Stretcher" cases from stations to hospitals, but the design though effective is very primitive as the trailer has been designed as a unit and not as part of a system. To obtain the full benefit of a trailer system it should be possible in the first place to carry the trailer on the back of the car, and one man should be capable of placing it in that position and also of lowering it to the ground and attaching it as a trailer. Further the trailer must be so designed that it will pack up flat in a small compass for facility of transport in stacks. Moreover the wheels should be interchangable with the car wheels.

(3) THE POWERFUL TOURING CAR.

To obtain the full benefits of a powerful touring car, the roads must be in fair condition. Unless this is the case the life of the car will be distinctly short. For this reason this type of car should not be permitted to approach near the firing line, but should be reserved for high speed work from base to base or depot to depot and for the conveyance of persons or small parties whose duties are administrative and the rapidity of whose movements is important. The necessary number of such cars will be comparatively small, but their sphere of action will be large. Any Mechanical transport depot should therefore be in a position to render prompt repairs and replacements.

Unless the number of different spares to be carried at each depot is to assume enormous proportions, it is necessary

that this type of car should also be limited to one standard, though variations in the body work would be permissible.

The selection of the design presents no difficulties as nearly any high grade, high powered, modern car would be a suitable type, though a few modifications from standard practice might be desirable. To facilitate inspection, adjustment and cleaning, the body should be detachable and the detachment should not entail interference with any electric wiring or control.

The car should be equipped with an electric lighting outfit so designed that the current generated will be suitable for use with a portable wireless telegraphy plant. The capacity of the petrol tank should be more generous than usual and a petrol level indicator would be of great assistance to the drivers.

Disc wheels with detachable divisible rims provide the maximum convenience for tyre changing and cleaning. The finish of the car should be guided by general utility and service rather than by appearance. Plated or polished parts should be studiously avoided as such finish serves no useful purpose and only entails somebody's time being wasted to keep them clean.

(4) MOTOR LORRIES.

In considering the uses of lorries, I cannot but help thinking that their utility is greatly over estimated and that their use should be curtailed to the transport of such articles whose bulk or weight prohibit the use of the smaller and lighter type of vehicle. Mechanical transport is essentially intended to travel on roads good, bad or indifferent. It may at times be advantageous to depart from the beaten track and strike across country, but such journeys are very exceptional. The United States Army, however, think otherwise. Their conception of a motor lorry is that it shall be capable of carrying a two ton load anywhere where it could be taken by a team of mules. To comply with this drastic specification the

"Jeffery Quad" was designed, built, accepted and supplied in large quantities. This remarkable vehicle steers and drives with all four wheels besides displaying mechanical ingenuity in many other ways. It is capable of amazing feats in the way of negotiating obstacles, but it has its limitations.

A far preferable manner of furthering mechanical transport would be to remove or reduce the obstacles so that a more normal type of vehicle could be capable of negotiating them. I consider that mechanical transport should normally be confined to permanent or temporary roads, and that transport over "trick" country can be more suitably dealt with by other means. The mechanical mule is about as promising as an automaton.

It may be assumed that even in the United States the transport will spend about 99.9 per cent of its time on roads and the question of the road maintenance is a very serious one. Owing to its heavy axle loads the motor lorry is one of the most road destructive agents. In peace times roads are (or should be) systematically maintained. During times of war it is impossible to do this and every effort must therefore be made to employ only such types of vehicles whose road destructive influence is the absolute minimum. During war the question becomes even more serious as the probabilities are that the road traffic will be confined to particular roads for prolonged periods; and it is equally probable that these roads were never intended or built to withstand heavy road traffic.

As the roads becomes worse the liability to mechanical breakdown rapidly increases, and further the use of the road by other vehicles becomes more and more restricted. Another point against the motor lorry is the difficulty in manoeuvring it in confined areas. Its comparatively slow speed is no defect, but the physical strain of driving a heavy lorry must not be overlooked.

Notwithstanding the foregoing, the motor lorry has a distinct sphere of use, and I have rather tried to indicate where it should not be employed. From the experience the Mecha-

nical Transport Corps are now obtaining, the design of a suitable type of vehicle should consist of the elimination of undesirable details. One of the gravest defects of the normal lorry is the excessive dead weight compared with the carrying capacity. Moreover the height of the platform from the ground does not facilitate rapid loading from and unloading to ground level. In the interests of the lorry as well as the roads the speed should be limited to 15 miles per hour maximum.

The design of a lorry engine differs considerably from that of engines for other types of vehicles, as the condition of normal service of the lorry engine is maximum power over prolonged periods. For this reason bearings and lubrication must receive special attention. The use of ball or roller bearings should be carefully considered, as though perhaps not so long lived as white metal lined bushes, they considerably reduce the consumption of lubricating oil. Another point in their favour is that a replacement is easier than with a plain bearing, which latter requires skilled fitting. The lorries should be capable of prolonged journeys without having to replenish with water, fuel or lubricating oil. This should not however be overdone as I consider has been done by one well known maker whose engine contains in the pump sufficient lubricating oil for 5000 miles. After about 3000 miles running the driver will probably forget that there ever was, or even is, such a thing as lubricating oil, and the first—and only—reminder he will receive will probably be a seized engine somewhere near the 5000th mile.

Whatever design is settled upon, it will have to be rigidly standardized for the same reasons as apply to the types previously discussed. Due to its size, weight and power, a motor lorry requires frequent systematic inspection with a view of detecting any slight defect which, if neglected, might cause a serious delay. This systematic inspection should apply to all vehicles but more especially to the lorry which is not so sensitive to minor lack of adjustment. Squeaks and rattles which are audible to the drivers, of smaller cars are frequently inan-

dible to a lorry driver who thus receives no warning of trouble to come.

Every lorry should be provided with a winding gear to enable it to extract itself from difficult positions. The power should also be available for driving other stationary machinery, such as water pumps, dynamos, without having to dismantle or affect any alteration to the lorry.

ARMOURMENT—Achilles had one vulnerable part and was put out of action by it. In the same way an armoured car is liable to be put of action by a stray bullet unless the armourment is absolutely complete. Such protection would be extremely heavy. The plating for quite a small car would weigh nearly one ton, which is a prohibitive weight.

It follows therefore that a car intended for transport and utilized as such cannot be fully protected, and any protection will have to be a compromise. A fully protected car is essentially a fighting and not a transport unit, and must be designed as such.

TRACTORS.

There has been and still is a great laxity of nomenclature in the use of the words "transport" and "traction", as applied to self propelled vehicles. The leading English motor journal on commercial vehicles embodies the word traction in its title, whereas it deals almost entirely with transport. Transport implies carrying and traction haulage. With the exception of mountain rack railways the power available for either traction or transport is eventually transmitted by friction between the driving wheels and road or the rails in the case of electric trams and locomotives. The power which can thus be transmitted frictionally is a function of the co-efficient of friction and the pressure between the two friction faces, namely the wheel and the road. Obviously this pressure is the axle load. With transport, the axle load increases with the load carried and the power transmission is assisted. In the case of tractors the driving axle load is constant, depend-

ing entirely on the weight of tractor, and the load hauled has no influence on the transmission of power.

As a result to enable the full power developed by a tractor to be transmitted, it is necessary to increase the friction between the road wheels and the road. This is accomplished in many ways. The most common method is for the road wheels to have steel bars or spikes attached to the tread, and it is difficult to conceive a more effective road-breaking device, other than a scarifier. As road tractors are a class by themselves, no further reference need now be made to them.

STANDARDISATION.—For the four types of vehicles, I have advocated a rigid standardization and this should not cease with each type. All types should be limited to certain standard nuts and bolt threads. In addition to standardising the vehicles, the loads should also be standardised as far as possible. It should not be difficult to arrange for the majority of supplies to be boxed or crated to one convenient size or multiples thereof. This will ensure the available space being fully utilized and besides facilitating the determination of loads, will prevent over loading.

There is no reason why standardisation should entail stagnation in design. The probabilities of radical changes in design are remote, while detail improvements can be gradually incorporated without prejudice to the efficiency of the repair depots.

MAINTENANCE.—The best maintenance system is one that entails periodical detail inspection with the object of detecting defects and anticipating mechanical break-downs. It is a poor policy to wait until some thing happens and then repair it. For example, take the case of the petrol pipe. This normally gives no trouble and in consequence receives no attention. It is however liable to fracture. The liability to fracture is greatly minimized if the copper pipe is properly annealed. Vibration gradually counter-acts the annealing until the copper again becomes partially crystalline and more

liable to fracture. A good maintenance scheme would ensure this pipe being annealed every three thousand miles and at the same time having the petrol tank thoroughly cleaned out and all petrol joints re-made. The chances of a breakdown from these causes would thereby be reduced to the absolute minimum. Such a system, which should embrace every part of the vehicle, will cause maintenance to assume a preventative rather than a remedial character and will ensure maximum efficiency and incidentally economy also.

For dealing with actual repairs, every depot should be equipped to undertake any repair to any vehicle. To have separate depots for different types, limits their sphere of action and is bound to cause unnecessary delays.

If the vehicles have been designed with the view to facilitate repairs and adjustments the time that any car has to be detained for such should be very short. The great object of a repair depot should be to get the car again fit for the road in the minimum time. The methods of a service depot must therefore be quite different from those adopted at garages. Thus, if a car comes in with a bent front axle, a fresh axle should be fitted and the car sent out for further work. This is the quickest method and has the additional advantage that it relieves the depot accommodation. The damaged axle can subsequently be repaired and taken into stock for future replacement.

RECORDS.—Records of mileages and loads, fuel and lubricating oil consumption, tyre replacement, maintenance, etc should be most carefully maintained and compiled. Such records are invaluable for deciding on future improvements, besides keeping a control on the service rendered. The personal element, i. e. the driver, can also be gauged and any mechanical or personal defect can be readily detected.

TRAINING OF MEN.—In the early days of motoring a man who drove a car and was sufficiently ambitious to hope to reach his destination needed to be a skilled mechanic. This is no longer the case, though a man with some

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mechanical training will undoubtedly obtain better results from a car than a mere driver pure and simple. All drivers should therefore have to first pass a certain time in the repair depots and works. In addition to obtaining better drivers, the men will benefit as they will be better fitted to obtain work when they revert to civil employment.

Men from branches of the service other than the Mechanical Transport, should be encouraged to become efficient drivers, and by efficient I mean capable of driving each of the various types of vehicles. Economy in fuel and tyres should earn a bonus, as in practice it is proved that the most economically run car is usually also most free from mechanical break-downs. Good driving should receive a similar reward to good shooting. Excessive speed, taking all circumstances into consideration, should be severely punished. It is usually absolutely unnecessary and is always most uneconomical in all ways.

FUEL—At present petrol is the only fuel used, but there are many reasons why development along other lines should be encouraged. The other alternatives are paraffin and industrial alcohol. The latter is by far the most promising, but till such time as the legislature restricting its production is altered, no progress can be expected. Its great advantage is that it can be easily manufactured from vegetable produce at home, thus rendering us independent of supplies from outside sources, besides encouraging agriculture.

"OATS"

By

CAPTAIN D. O. W. LAMB, 10th D. C. O. Lancers.

"Experience has shewn that oats are, generally speaking, the best of all grains for horses."

Few if any of us, who have had any experience of horses, will disagree with the above quotation taken from "Animal management." Few of us too, in the average station in India can afford to give our horses as much oats as we should like, but in that, as in many other things, our poverty and not our will consents.

It may safely be said that 90% of horses in Indian Cavalry have never tasted oats, while in British Regiments and Batteries most Commanding Officers reject a small ration of oats in favour of a larger one of some cheaper grain.

The fact that gram is the standard ration on service in this country has no doubt a certain amount of influence on peace time feeding, as everyone knows—and dislikes—the effect which a sudden change to a gram ration has on horses.

Granted that gram, owing to its smaller bulk, is a more convenient service ration, still it is the object of this article to prove that oats, which are a more suitable feed in every respect, can compete with other grains as regards price both in peace and war.

All the above remarks regarding horses apply equally to mules and to other transport animals as well.

In the days before grain was exported in quantity from India, it was quite common for gram to sell at the rate of a rupee a maund, with other grains cheap in proportion. Consequently it was impossible then for oats to compete with other grains and hence the custom of feeding on the latter.

At the present time we may take it for the sake of argument that gram sells in the average station at four

rupees a maund and oats at five. The actual price of oats in Bombay in September 1915 was Rs. 7-4-0 and at Allahabad Rs. 7-2-3 per maund.

Now the question arises, "How much per maund of that goes into the pockets of the grower?" We may safely say, "Less than half". Why? Because Government for some reason or other have a prejudice against dealing with the producer. And now to get down to some solid facts. Some of the best oats in India are grown in Behar, and the cost to the grower seldom exceeds Rs. 1-0-0 per maund. The custom in most concerns is to advance the ryot money in the autumn and take oats from him in the spring in repayment of the advance and payment of rent of land. The planter naturally prefers to sell straight off his thrashing floor and then it is that the contractor steps in and buys up most of the available stock which he later retails to Government at 150—200% profit.

Could Government see their way to approach the planter in Behar in the autumn and say, "we are prepared to take so many thousand maunds of oats from you in the spring. We shall supply our own bags and are willing to advance, now Rs. 1-0-0 per maund of the purchase price. In return you must supply good, sound, clean oats free on rail, which will have to be passed by an officer on your thrashing floor", then the writer firmly believes that thousands of maunds would be forthcoming at from Rs. 2-0-0 to Rs. 2-8-0 per maund as an outside price.

It is very hard to give any definite figures as until the planter is approached with a definite proposal he is naturally not going to commit himself. The years 1914 and 1915 were bad for oats in Behar, still the writer supplied his modest requirements in May 1914 at Rs. 3-0-0 per maund and in 1915 at Rs. 3-8-0. In September 1914 the bazaar rate had gone up to Rs. 5-0-0 in Muzafferpore and in September 1915 planters were asking Rs. 4-8-0 to Rs. 5-0-0 per maund for quantities of 500 maunds and upwards.

It is only natural that oats stored through the monsoon should rise considerably in price, still, why should Government not have its own grain elevators and store for themselves? In one year, it is safe to say, the elevators would pay for themselves and the interest for six months on the money advanced for the purchase of grain as well.

Thrashing takes place about April and lasts for a month at the outside. During this time a supply officer could tour round the oat growing districts and pass oats actually on the thrashing floor. His travelling expenses added to the price of several lacs of maunds would have no appreciable effect on the cost per maund. A freight of Rs. 1-0-0 per maund will roughly carry grain from Behar to Bombay, Peshawar and Quetta, and so we have oats landed in these places at a price which can compete favourably with locally produced gram.

In the above calculations the writer has taken what he thinks is an outside price and in practice believes it would be found that oats, bought under the suggested conditions, could not only compete with, but cut out other grains.

One argument which has been used against oats as a service ration is that they are unobtainable in sufficient quantities. Is it not open to Government to improve this supply? Year by year the amount of land being brought into cultivation in canal colonies is increasing. The profit to be made out of those lands is shewn by the enormous rise in their value in recent years in Lyalpur and similar districts. A grant of land on one of these colonies is the most prized reward to which a native can aspire.

Certain conditions are attached to the grants, as for instance, the keeping of brood-mares, yet the profits are such that the man who aspires to a grant of land is ready to agree to any conditions Government likes to offer and one of the conditions should be as follows:—

“*All* revenue connected with land on canal colonies

shall be paid in oats, which will be passed by a Government official, and the revenue calculated at the rate of 1 maund of oats equals one rupee.

Should the suggestions put forward above be adopted there is no reason why in a few years time oats in sufficient quantity should not be forthcoming. With such as the service ration and at a reasonable price, a demand would arise from Silladar Cavalry and, it is not too much to assume, that the supply would increase to meet such demand.

What effect this would have on grain prices in general we shall leave it to others to surmise, but the assumption is that healthy competition would tend to lower prices all round which would be to the advantage of everyone.

That there are difficulties in the way it would be useless to deny and not least amongst these is the vested interest of the contractor. That any vested interests should exist or to aigue that the difficulties are insurmountable is absurd.

Times like the present, when high prices are the order of the day, are not the most suitable in which to try experiments. Still the first move must come from Government and once the planter of Behar is assured of a good and ready market the supply of oats to meet all reasonable demands will be forthcoming.

INFANTRY ESTABLISHMENT INDIAN ARMY.

BY

CAPTAIN T. MOSS, 30th Punjabis.

When proceeding on Field Service the number of men for the firing line of an Indian Regiment is nowadays so greatly depleted by the calls made on companies to supply men for Signalling, Machine guns, transport etc., that a considerable increase in establishment must be made if it is desired to obtain the full fighting value.

Before giving tables shewing the suggested increase it will perhaps be as well to set down in detail any changes which from experience are considered to be necessary and useful. I would suggest the creation of an establishment supernumerary to the Fighting Man.

Members of this establishment would be enlisted as Sepoys in order to facilitate discipline, but their duties being such that they can never be available for the firing line it is misleading and useless if they are confused with the fighting man.

In this establishment would be found—

Clerks.

Ward Orderlies.

Quartermaster's Establishment.

Armourers.

Mochis.

Carpenters.

Darzi.

Schoolmaster.

Certain of these men would proceed on service (see Table B.) If recommended by the Commanding Officer, promotion would be given to these men according to length of service;

Naick on attaining 8 years service.

Havildar , 14 , "

but such promotions would not affect the numbers of the non-commissioned ranks amongst the fighting men.

The changes which are proposed in the fighting strength will affect:—

- (a) Company strength.
- (b) Machine guns.
- (c) Signallers.
- (d) Transport Section.
- (e) Sanitary Squad.
- (f) Stretcher Bearers.

Taking each of these items in turn the proposals are:—

- (a) The minimum strength for a company going into action to be 100 men.
- (b) Maxim Gun establishment to be 8 guns per Regiment.
- (c) An establishment of 3 Non-Commissioned Officers and 30 men; the present number is quite inadequate owing to demands made from outside sources.
- (d, e, & f.) Men for these establishments to be over and above the company strength.

The following tables will show the numerical result of these proposals:—

- | | |
|-----------|-----------------------------|
| Table "A" | ... Peace Strength. |
| Table "B" | ... Field Service Strength. |
| Table "C" | ... Depot Strength. |

Infantry Establishment Indian Army. 89

TABLE "A".

BRITISH OFFICERS.

Commandant	...	1	
D. C. Commanders	...	4	
D. C. Officers	...	6	(a) Includes 2 for Depot.
Adjutant	...	1	
Quartermaster	...	1	
M. G. Officer	...	1	
Signalling Officer	...	1	
Transport Officer	...	1	
Medical Officer	...	1	
		<hr/>	
TOTAL	...	17	<hr/>

INDIAN OFFICERS.

Subadar Major	...	1	
Subadars	...	8	(b) Includes 1 for Depot.
Jemadars	...	8	(b) " " " "
Jemadar Adjutant	...	1	
M. G. Officer	...	1	
S. A. Surgeon	...	1	
		<hr/>	
TOTAL	...	20	<hr/>

N. C. OS. & MEN.

Havildar Major	...	1	
Qr. Mr. Havildar	...	1	
Havildars	...	38	(c) Includes 6 for Depot.
M. G. Havildars	...	4	
Sig. Havildar	...	1	
Transport Havildar	...	1	
Drill Naick	...	1	
Naicks	...	38	(c) " " " "
M. G. Naicks	...	8	
Sig. Naicks	...	2	
Transport Naick	...	1	
Sanitary Naick	...	1	
Buglers	...	18	(d) " 2 " "
Sepoys	...	1082	(e) " 112 " "
		<hr/>	
TOTAL	...	1197	

TABLE A—contd.

SUPERNUMARY.

Schoolmaster	...	1
Armourers	...	2
Ward Orderlies	...	4
Clerks	...	7
Qr. Mr. Establishment	...	6
Carpenters	...	4
Darzi	...	1
Mochi	...	3
<hr/>		
TOTAL	...	28
<hr/>		
GRAND TOTAL	...	1262
<hr/>		

TABLE "B".

Detail.	PERSONNEL.		Followers.		REMARKS.											
	Indian.	British Off.	S. A.	N. C.	Officers.	Brigadiers.	Officers.	Sergeants.	Cplrs.	Total.	Private.	Horses.	Ponies.	Mules.	Mess Transport.	
HEADQUARTERS.																$\left. \begin{array}{l} a. 4 Havildars \\ 8 Nnicks \end{array} \right\} = 12$
Commandant	1	...	...	...	...	...	...	...	...	2	2	2	2	2	2	...
Adjutant	1	...	...	...	...	...	...	...	...	2	2	2	2	2	2	...
Quartermaster	1	...	1	...	1	...	...	1	...	2	1	1	1	1	1	...
Medical	1	...	1	...	1	...	...	1	...	2	1	1	1	1	1	...
Officers Mess	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Stretcher Bearers	...	...	...	...	...	...	...	32	34	...	...	...	...	...	...	...
Total Hqs.	4	...	1	1	...	...	32	32	...	8	6	1	1	1	4	...
 MACHINE GUNS.																...
British Officer	1	...	1	...	1	...	...	...	...	1	...	1	...	1	...	...
Indian " "	...	...	...	...	...	...	12a	...	...	12	...	12	...	12	...	48
N. C. Officers	...	...	...	...	...	...	...	...	...	72	72	72	72	72	72	48
Depoys	...	...	...	...	...	...	...	...	...	72	72	72	72	72	72	48
Total M. Guns	1	1	1	1	1	1	1	12	12	72	72	72	72	72	72	48

TABLE B—cont'd.

Detail.	PERSONNEL.						Followers.						REMARKS.
	Indian.			European.			Horses.			Mules.			
British Off.	S. A.	Officers.	N. C. Officers.	Non-Commissioned Officers.	Sergeants.	Privates.	Non-Commissioned Officers.	Cerfs.	Horses.	Ponies.	Mules.	Mess Transport.	
SIGNALLERS.													
British Officer	1	...	...	36	...	...	3	...	2	1	...	...	b. 1 Havildar 2 Naicks } = 3
N. C. Officer	...	...	...	...	...	...	30	30	...	...	...	...
Sergeys	...	...	...	...	...	...	30	30	...	...	...	...
Total Signallers ...	1	...	...	3	...		33	33	2	1	...	...
TRANSPORT.													
British Officer	1	...	...	2 c	...	...	2	24	24	...	...	...	c. 1 Havildar 1 Naick } = 2
N. C. Officer	...	...	...	...	...	...	24	24	...	...	...	...
Sergeys	...	...	...	...	...	...	24	24	...	...	...	...
Total Transport ...	1	...	...	2	...	...	24	24	26	...	2	1	
SANITARY SQUAD.													
N. C. Officer	...	...	...	1	...	...	12	12	1	...	...	...
Sergeys	...	...	...	...	...	...	12	12	12	...	...	...
Total San. Squad ...	...	...	...	1	...	...	12	12	13	...	...	...

D. C. Commanders & Officers	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
One Company.																			
Subadar	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Jemadar	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Hav. & Naicks	...	...	...	...	...	...	...	8	...	...	8	...	...	...	...	...	...	...	...
Buglers	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...
Sergeys	...	...	...	...	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...
Public Followers	...	...	...	...	...	...	...	...	...	...	...	100	...	7d	...	...	...	...	...
Total Company	...		2	...	8	2	100	112	7	...	...	...	...	...	...	...	...	...	...
d. 3 Langris 2 Sweepers 2 Bhistics } = 7																			
SUPERNUMARY.																			
Ward Orderly	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...
Clerks	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...
Qr. Mr. Establishment.	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...
Armourers	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Mochis	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...
Total Supernumary.	...	...	...	...	...	...	...	...	...	...	12	12	...	...	...	...	...	...	...

Infantry Establishment Indian Army.

TABLE B—Contd.
RECAPITULATION.

Detail.	PERSONNEL.							Followers.		REMARKS.			
	Indian.							Private.	Public.				
	British Officers.	S.A.	N.C.	Surgeon.	Officers.	Burglars.	Sepoys.	Total.	Horses.	Ponies.	Mules.	Mess Transport.	
Headquarters	4	1	1	1	12	..	32	34	..	8	6	1	4
Machine Guns	1	1	..	3	..	30	33	..	2	1	..	48	..
Signallers	1	1	..	2	..	24	26	..	2	1	..	..	..
Transport	1	..	..	1	..	12	13	..	..	..	..	..	..
Sanitary Squad	..	..	..	..	..	..	..	..	..	..	..	..	..
D. C. Commanders	..	..	..	..	..	..	..	..	..	..	..	..	..
8 Companies	8	16	..	64	16	800	896	56	..	..	..	..	..
	15	17	1	83	16	970	1087	56	30	17	1	48	4
Supernumerary	..	..	..	..	..	..	..	12	12	..	..	..	..

TABLE "C".

British Officers	...	...	...	2
Indian Officers	...	...	...	2
Havildars (<i>a</i>)	...	...	...	7
Naicks (<i>b</i>)	...	...	...	7
Buglers	...	...	...	2
Sepoys (<i>c</i>)	...	...	...	112
Schoolmaster	...	...	...	1
Assistant Armourer	...	...	...	1
Ward Orderly	...	...	...	1
Clerks	...	...	...	4
Carpenters	...	...	...	4
Darzi	...	...	...	1
Mochi	...	...	...	1
Qr. Mr. Establishment...	...	...	...	3
<hr/>				<hr/>
GRAND TOTAL				... 148
<hr/>				<hr/>
(<i>a</i>) Includes	...	{ 1 Drill Havildar. 2 Recruiting Havildars. 4 Pay Havildars.		
(<i>b</i>) ,,	...			
(<i>c</i>) ,,	...			
{ 12 Drill Instructors <u>Band</u> .				

During the present war Regiments on INTERNAL SECURITY have suffered a severe and undesirable drain on their non-commissioned-officers from calls for Pack Store Havildars for Field Hospitals: a call for a large number of sepoy's for Ward Orderly duties has also been experienced, the thinning of the fighting ranks in this fashion is to be deplored, especially so in the case of trained non-commissioned-officers who can hardly be spared.

It is suggested that this evil might be removed by enrolling for such duties Havildars and Sepoys going on pension and that such men should be trained in these duties by being sent to hospitals for training 6 months prior to being transferred to the pension establishment.

They would receive an enhanced pension and be called up for a month's training every 3 years; when they become physically unfit for such service they would be put on the Ordinary Pension Establishment.

The same drain has been experienced in the matter of Signallers, but this is no doubt due to Signalling Companies being still in their infancy and will be rectified after the war. If however it is thought likely that Regiments would in the future be looked to for drafts it would be advisable to greatly increase the establishment of Regimental Signallers.

MUSKETRY NOTES SUGGESTED BY THE WAR.

By

CAPTAIN T. MOSS, *30th Punjabis.*

In the present war Machine Guns have come into great prominence and their value been so clearly demonstrated that no one can now have too many of a weapon which a short while ago was entirely despised and utterly ignored.

Fighting is nowadays so close and fierce that it is no uncommon occurrence for whole machine gun sections to be wiped out, and it is necessary that the nearest men to hand should be capable of taking charge in such an event.

At present the only place where training in the machine gun is given is the Musketry school, consequently the number of trained officers and N. C. Os. is limited and many of these have not the gift of imparting knowledge.

The actual working of the machine gun and the methods of dealing with the ordinary forms of "jam", can easily be taught in a week to ten days, and every officer, N. C. O. and man ought to be taught this much.

Clearly the Musketry schools cannot deal with the large number of men involved in this scheme, but it would be much simpler and far cheaper to send the instructor to the learner. It would be the duty of the former to teach the Officers and N. C. Os. of Regiments, who would in turn be responsible for the instruction of their men.

It is not suggested that every one of the Officers and N. C. Os. taught in this manner will be capable of imparting instruction, but amongst the many there will be no doubt a certain number who will be able to do so.

For the making of a successful instructor in Machine guns it is essential that, to the power of imparting knowledge, there is added a liking and enthusiasm for the subject, and I suggest the sending of picked Instructors to regiments because it is often found that men sent to the Musketry

schools fail in all or some of these respects, with the result that the regimental instructor is not as good as he might be. Musketry schools have to make the best of the material they get, and regiments in sending men have to gamble, as their capabilities can only be discovered when they are engaged in instructional work and not by examination, for which they become word perfect.

Under the suggested scheme every man has his chance and those who have the desire to learn and the power of imparting their knowledge will come to the front.

It is of course not to be expected that sufficient ammunition will be forthcoming to make expert shots of every man in a regiment, but every man should at any rate know what it feels like to fire a gun. At the present time if it is considered that any large increase in expenditure of ammunition is undesirable, sanction could be given for all trained shots to fire 40-50 rounds of their annual allotment in order that they might feel confident that they could handle a Machine Gun in case of emergency.

It is more than probable that the old saying, "A little knowledge is a dangerous thing", will be urged against this suggestion, but the experiences of several Indian Army Reserve Officers go to disprove this. They had absolutely no knowledge of Machine guns previous to a course of the kind suggested; and I have heard from them that the knowledge acquired covered all necessary ground, when put in charge of the Machine Guns of the regiments they are now on service with.

FIRE DEVELOPMENT.

In consequence of new methods of siting trenches with a view to escaping direct artillery fire, a limited field of fire entailing close fighting is the general rule in France. It was in this type of fighting that the value of volleys first came to be appreciated and it would seem reasonable to suggest that an improved form of volley firing might be taken into use with good results; namely—*volleys by rapid fire.*

Good volley firing was in the days of close fighting one of the deciding factors in many battles, on the one hand owing to the moral effect produced on the enemy, and on the other to the steadiness acquired by the firers. The moral effect would nowadays be greatly increased by the rapidity of fire and it would also seem likely that economy of ammunition and better control could be obtained especially in the case of newly trained troops. After the order for rapid fire has once been given, many rounds are wasted after the desired effect has been obtained owing to sheer excitement; a little experience would soon teach the volume of fire required under ordinary circumstances and the fire controllers would employ rifles and rounds accordingly.

We frequently read of the enemy being allowed to come closer before opening fire which proves that all control is not done away with by the noise of the modern battle and there should be no difficulty in starting firing by volleys, though once firing has become general, it is more than likely that control becomes very difficult or almost impossible; it is however with a view to future wars as much as to the present one that the possible value of rapid volleys is suggested.

To train men to fire rapid volleys, the following method should prove simple and effective: they should be taught to wait for the word to fire, from which moment the timing of the volleys is to be obtained by mental counting synchronising with the motions of the bolt in loading and unloading, thus "One", bolt back after firing first round

"Two", bolt forward and knob down

"Three", press the trigger

"One", and so on.

It is not suggested that this should be the one and only method of firing, but, employed at the right time and target, enormous moral effect must surely be obtained without any loss to deadliness of fire.

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(b) Thereafter, when drawing either Indian Army leave pay, or British pay of rank, *plus* field, lodging, fuel and light allowances, the same rate of subscription as would be paid if in receipt of sterling leave allowances, under paragraphs 589 and 598, Army Regulations, India, Volume II.

REVIEWS OF BOOKS.

THE TIMES (LONDON) HISTORY OF THE WAR.

Parts 48 to 59.

Chapter LXXIII deals with a new theatre of war, and describes the unsuccessful attempt of the Turks to invade Egypt in the spring of 1915. The account is clearly written, the maps are good and the reader will get a clear idea of the movements and operations of the Turks.

Chapter LXXIV gives a description of the various bombs and methods for their propulsion used in the trenches in France and Flanders.

Chapter LXXV gives a clear and fair account of the partial success of the British and Indian forces at Neuve Chapelle in March 1915, the results achieved and what our troops failed to achieve.

An interesting account in Chapter LXXVI follows of the operations of the Russians in the Carpathians during the 6 weeks that elapsed between the fall of Przemysl and the opening of the great Austro-German offensive in Galicia at the beginning of May; and also of the minor operations on the R. Niemen during the same period.

Then follow 3 Chapters, LXXVII, LXXVIII and LXXIX, which are of little interest to the military reader; they deal with the measures taken by neutrals to help the population of Belgium, who were enjoying the "blessings" of German *kultur*, and with the efforts of the women of the British Empire to further the cause of the Allies.

If there is a criticism that might be made regarding the History as a whole, it is that it is too voluminous; 4 volumes have now been completed and only 10 months of the war have been described; unless an effort is made to condense the history and eliminate matter which has

little or no effect on the war, such as Chapters LXXVII and LXXVIII, the object of the book as a history and book of reference will be defeated by the immense amount of matter that has been collected.

Chapter LXXX, which begins Part 53 and Volume V of the History, gives an account of the origin, history, and end of the Triple Alliance, and the reasons which influenced Italy to leave it and then declare war against her old allies. As can be gathered this is of little military interest; the following Chapter LXXXI is of greater interest to soldiers as it describes the Italian army and the strategical problems it has to solve in its action against Austria. In Chapter LXXXII the scene is shifted back to the northern part of the western front; the minor fighting during the latter half of March and beginning of April between La Bassee and the sea, the capture of Hill 60 on April 17th, the German attempts to retake the hill on April 18th, 19th, 20th, and 21st are well described. It then gives a clear account of diabolical innovation employed by the Germans, namely the use of poisonous gas, and their second great attempt to capture Ypres and to break a way through to Calais; this attempt which commenced on April 22nd was finally fought to a standstill by May 17th and a portion of the Indian Army Corps took an effective part in its repulse.

The next two parts of the History, Chapters LXXXIII—LXXXV, are of very great interest, describing the great offensive movement of the Austro-German forces through the Baltic provinces and Galicia as far as the fall of Lemberg on June 22nd. The story is clearly told and due justice is done to the stubbornness with which the Russians fought their way back in face of great superiority in numbers and *material* on the side of the Austro-German forces.

The next three numbers of the history may be described as recounting comparative side-issues. Chapter LXXXVI is an in-

Reviews of Books.

teresting study of the psychology of Germany during the war, illustrated by photographs and caricatures from the German press. Chapter LXXXVII describes the gallant part played by the Canadians in the fighting in Flanders. Chapter LXXXVIII describes the fighting at Aufers and Festubert on May 9th and 16th and the successes won by the British forces.

Chapter LXXXIX recounts the effect on American public opinion of the German attempts to spoon-feed it, the Belgian atrocities, the sinking of the Lusitania and other liners and the German attempts to stir up labour unrest in the United States.

BOOKS RECEIVED.

PUBLISHERS:—GALE & POLDEN LTD., LONDON & ALDERSHOT.

“Guide to Official Letter Writing, Orders, &c.”, by An Adjutant. (Price Re. 1-2-0).

“How to keep fit”, by Major H. Waite, R. A. M. C. (T). (Price Re. 0-4-0).

“The Musketry Teacher”, by Captain A. Morris, I. of M., 7th Royal Fusiliers. (Price Re. 0-12-0).

“The Soldier’s Night Guide” by Pathfinder. (Price Re. 0-3-0).

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
 1873...COLQUHOUN, Capt. J. A. S., R.A.
 1874...COLQUHOUN, Capt. J. A. S., R.A.
 1879...ST. JOHN, Maj. O. B. C., R.E.
 1880...BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882...MASON, Lieut. A. H., R.E.
 1883...COLLEN, Maj. E. H. H., S.C.
 1884...BARROW, Capt. E. G., 7th Bengal Infantry.
 1887...YATE, Lieut. A. C., 27th Baluch Infantry.
 1888...MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (**especially awarded a silver medal**).
 1889...DUFF, Capt. B., 9th Bengal Infantry.
 1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
 1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893...BULLOCK, Maj. G. M., Devonshire Regiment.
 1894...CARTER, Capt. F. C., Northumberland Fusiliers.
 1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.
 1898...MULLALY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (**specially awarded a silver medal**).
 1899...NEVILLE, Col. J. P. C., S.C.
 1900...THULLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E., (**specially awarded a silver medal**).
 1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.
 1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R.F.G., R.E., (**specially awarded a silver medal**).
 1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907...WOOD, Maj. E. J. M., 92nd Deccan Infantry.
 1908...JEUDWINE, Maj. H. S., R.A.
 1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 55th Rifles, F. F., (**speci lly awarded a silver medal**).
 1911...Mr. D. PETRIE, M.A., Punjab Police.
 1912...CARTER, Major B. C., The King's Regiment.
 1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
 1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
 (**specially awarded a silver medal**).

MacGregor Memorial Medallists.

(With rank of Officers at the date of the Award).

- 1889...BELL, Col. M. S., v.c., R.E., (specially awarded a gold medal).
- 1890...YOUNGHUSBAND, Capt. F. E. King's Dragoon Guards.
- 1891...SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894...O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Haviidar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

MacGregor Memorial Medallists—*contd.*

- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).
- MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
- GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
- SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
- MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
- TURNER, Capt. F. G., R.E.
- KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
- GURMUKH SINGH, Jemadar, 93rd Burma Infantry.
- 1912...PRITCHARD, Capt. B.E.A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
- WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
- MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.
- SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
- WARATONG, Havildar, Burma Military Police (specially awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)
- MORSHEAD, Capt. H. T., R.E.
- HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
- ALI JUMA, Havildar, 106th Hazara Pioneers.



QUARTERLY SUMMARY OF MILITARY NEWS AND ITEMS OF INTEREST.

ARMY HEAD-QUARTERS.

470. Camp Equipment.—It is hereby notified that Territorial I. A. O., Officers proceeding on field service out of 30th August 1915. India can obtain a tent from the Ordnance Department, either on hire or by purchase.

507. Passages—Regulations.—With reference to paragraph I. A. O., 83 (i) (2), Army Regulations, India, 20th September 1915. Volume X, it has been decided that, for movements within Indian limits since the outbreak of the present war, officers invalided to India from field service (including operations on the frontier) shall be allowed:—

(i) free conveyance for baggage on the temporary duty scale laid down in paragraph 104.

(ii) lying-down accommodation by rail on the conditions mentioned in paragraph 158-VII, when necessary in the opinion of the despatching medical officer.

550. Discipline—General.—It is notified for the information I. A. O. of all concerned that as officers and men 10th October 1915. landing in France, whether they arrive in a troopship or by passenger steamer, are required to wear uniform, the issue of passports to them is unnecessary. The fact that they wear uniform meets all requirements.

552. Bands and Messes.—The following are the rates of I. A. O. Band and Mess Subscription to be paid 10th October 1915. by officers of the Indian Army, who are prisoners of war with the enemy, or reported as missing:—

(a) For the first sixty-one days, the full rate of subscription payable under paragraphs 589 and 598, Army Regulations, India, Volume II.

(b) Thereafter, when drawing either Indian Army leave pay, or British pay of rank, *plus* field, lodging, fuel and light allowances, the same rate of subscription as would be paid if in receipt of sterling leave allowances, under paragraphs 589 and 598, Army Regulations, India, Volume II.

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1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of May:—

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(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

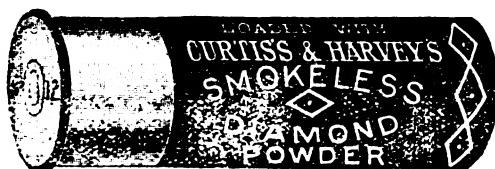
(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments, such as Frontier Militia, Levies and Military Police, also all ranks serving in the Imperial Service Troops.

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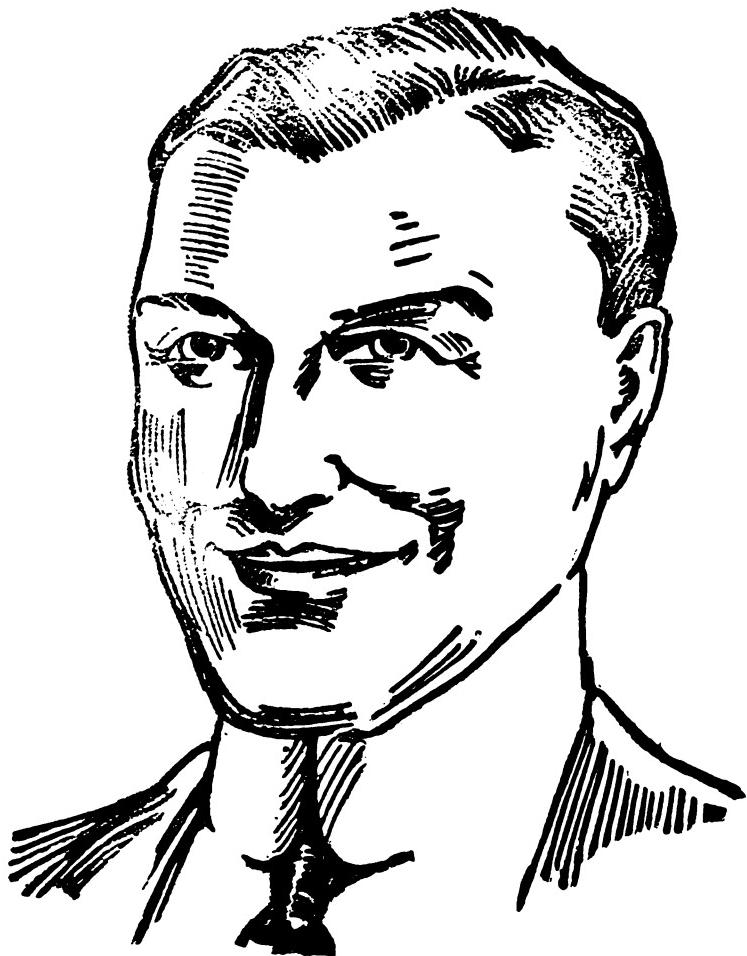
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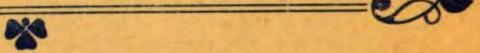
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Adventure, Sport, Travel and Adventures of a Despatch Rider	F M	345 881	Lewis, A. G. Watson, W. H. L.
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Artillery, Royal and Indian, History of in the Mutiny of 1857	M	877	Jocelyn, Col. J. R.
Baluchistan, The Frontiers of	F	346	Tate, G. P.
Basutos, The	N	372	Lagden, Sir Godfrey.
Belgium, Military Operations of, in Defence of the Country	M	878
Between the Lines	K	147	Cable, Boyd.
Blinded Soldiers and Sailors Gift Book, The	K	148	Goodchild, George.
British India, The Making of	N	368	Muir, Ramsay.
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Caliph's Last Heritage, The	N	367	Sykes, Lt.-Col. Sir M.
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Highland Regiments, The Story of the	M	880	Watson, Frederick.
Indian Memories, Recollections of Soldiering, Sport etc.	B	265	Baden Powell, Sir Robert.
Indian Sporting Birds	R	60	Finn, Frank.
Indian Year Book 1916	Q	224	Reed, Stanley.

Title.	Section.	No.	Author.
"I Accuse" (by a German) ...	N	364	Gray, Alexander.
Krupp's and the International Arms ments Ring. The Scandal of Modern Civilization	K	150	Murray, H. R.
Lucknow—A Guide to Places of In- terest, with Maps	F	344	Newell, Major H. A.
Military Law, Young Officer's Guide to Motorist, The Complete ...	G	33	Coddington, F. T. O.
	K	139	Young, A.B.F. and Aston, W. G.
Mountain, Memoirs and Letters of the late Colonel Armine	B	267	Mountain, Mrs.
Napoleonic Strategy, Studies in—How Wars were won,	S	252	Warner, G. T.
Ordeal by Battle	N	366	Oliver, Frederick S.
Pashtu Grammar, Notes on	Q	222	Cox, Major A. D.
Pashtu Part I	Q	223	Lorimier, Maj. D. L. R.
Pistol Shooting, Automatic	T	430	Winans, Walter.
Priuordial Man, The Signs and Symbols of	C	57	Churchward, Albert.
Sport, Travel and Adventure	F	345	Lewis, A. G.
St. Privat.—German Sources	M	879	Bell, Harry (Trans: by)
Transvaal—A Naturalist in the	R	61	Distant, W. L.
Vane the Younger—Life of Sir Henry	B	266	Ireland, W. W.
Whitakers Almanack 1916	Q	226	Whitaker, Joseph.

United Service Institution of India.

GOLD MEDAL ESSAY COMPETITION 1915-16.

The Council have chosen as the subject for the Gold Medal Essay for 1915-16 the following:—

“The improvement in strength and efficiency of the Volunteer Force in India.”

The following are the conditions of the competition:—

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- (2) Essays must be printed or type-written and submitted in duplicate.
- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1916.
- (6) Essays will be submitted for adjudication to Referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in August or September 1916.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely*, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA, }
1st Apr. 1916. }

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Musketry Regulations, Part I (Reprinted 1914). As. 8.

—Part II (Reprinted 1914) As. 6.

Field Service Pocket Book, 1914. Re. 1.

Signalling Training Manual. Part II. As. 8.

Maxim Gun Handbook. As. 8.

Field Artillery Training, 1914. As. 12.

Field Service Regulations. Part I. (Reprinted 1914). As. 8.

—Part II. (Reprinted 1914, with Amendments 1915). Re. 1.

Field Message Book. (Army Book No. 153). Re. 1.

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Manual of Map Reading & Field Sketching. (Reprinted 1914). Re. 1.

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Cavalry Training. (Reprinted 1915). Re. 1.

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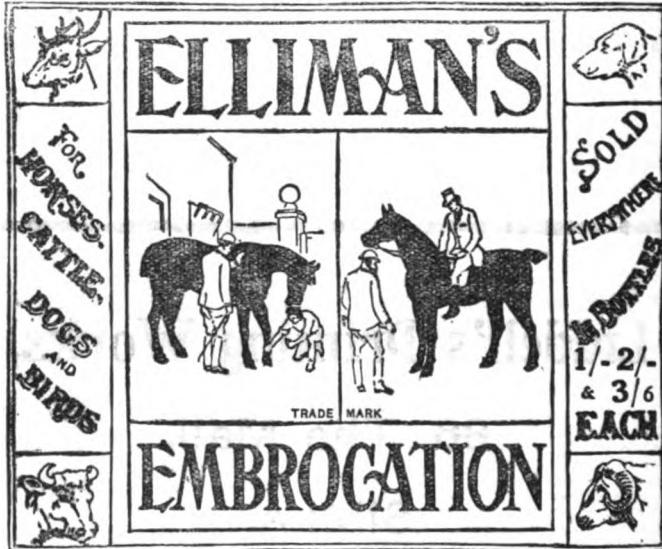
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United Service Institution of India.

APRIL 1916.

SECRETARY'S NOTES.

I.—New Members.

The following members joined the Institution between the 1st December 1915 and the 15th February 1916 inclusive:—

LIFE MEMBERS.

Commander H. St. C. Bowden. Colonel W. E. White.
Major H. G. Warburton.

ORDINARY MEMBERS.

2nd Lieut. F. B. Martin.	Capt. C. V. Martin.
Lieut. N. Burgan.	2nd Lieut. L. S. L. Dacres.
Lt.-Col. L. P. More.	Capt H. J. M. Curestjee.
Major G. K. Walker, C. I. E.	

II.—Tactical Problems.

In order to assist officers, working for Tactical examinations, the Institution has schemes for issue to members only, at Rs. 5 each, which includes criticism and a solution by a qualified officer ; 26 schemes are now available.

III.—Military History Papers.

(1) In order to assist officers in the study of military history, the Institution has sets of questions on the following campaigns.

- (a) One paper on the Waterloo Campaign.
- (b) Three papers on Callwell's Small Wars.
- (c) Two papers on the strategy of Russo-Japanese War.

Secretary's Notes.

- (d) Five papers on the battles of the Russo-Japanese War.
- (e) Two papers on the Afghan War, 1879—80.
- (f) Two papers on the Crimean War.
- (g) One paper on the Indian Mutiny.
- (h) One paper on the Shenandoah Valley Campaign, 1861-62.
- (i) One paper on the Bohemian Campaign, 1866, to the Battle of Koniggratz, inclusive.
- (j) One paper on the Jena Campaign, 1806.
- (k) One paper on the Franco-German War, 1870.

The charge for these papers is Rs. 5 each, which includes criticism by qualified officers.

(2) Pamphlets dealing with the Shenandoah Valley Campaign from April 1861 to June 1862, the Bohemian Campaign, 1866 to the battle of Koniggratz inclusive, and the Battle of Liaoyang, can be obtained from the Secretary, Price Re. 1 each, or Re. 1-2-0 per V. P. P.

IV.—Maps.

The Institution has for sale a variety of large scale maps, (2 and 4 inches to one mile), price As. 8 each.

They are specially useful for instruction in map reading, tactical schemes and in preparation for examination, and can be had either of English or Indian country.

V.—Premia for Articles in the Journal.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

VI.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 483, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service

Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors are requested to have their articles either typed or printed.

VII.—Library Catalogue.

The library catalogue revised up to 1st January 1916 is now available. Price Rs. 2. or Re. 2-4-0 per V. P. P. A list of books received each quarter is published with the Journal.

VIII.—Gold Medal Prize Essay, 1915-16.

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IX.—Regimental Army Lists.

The Institution is prepared to supply members and units with manuscript, type-written or printed pages from old Army Lists since 1800. Endeavours will also be made to procure extracts from the "Registers" prior to that date. The following will be the rates charged:—

Manuscript copy of each page	...	Re. I	0	0
Type-written copy, per page	...	Rs. 2	0	0
Printed copy, per page	...	Rs. 3	8	0
Binding if required	...	...	...	Extra.

It is regretted that our former arrangement with the press has come to an end, and we are no longer able to get the printing done as cheaply as before.

If facsimile of *type* is required the price of printed pages will range from Rs. 5-8 to Rs. 3-8 per page, according to the amount of matter on each page, the higher rate being charged for pages similar to those of the Indian Army in the current Army List.

X.—War Maps.

War Maps are on view in the Reading Room of the Institution, with the positions of the troops, so far as is known, marked with flags, in each theatre of War.

XI.—Annual Subscriptions.

The Committee again invite the attention of members to the large amount of unnecessary correspondence and expense annually caused to the Institution by the difficulty in getting in the annual subscriptions. On the 31st December 1915, the outstanding arrears

Secretary's Notes.

v

due by members are Rs. 6477, as will be seen from the statement of the annual accounts for 1915 enclosed with this journal. If members wish to resign their membership they have only to notify the fact in writing to the Secretary. If this is not done, it is presumed that they wish to remain members and the Journal is regularly posted to their last known address.

Much inconvenience and unnecessary correspondence is also caused by the failure of members to notify their changes of address or to make any arrangements for the Journal to be sent after them, when they change their address.

The remedy for both these matters lies with members themselves, and it is for their consideration whether they agree to continue supplying the Journal to those who have not paid their subscriptions, and to have the time of their staff largely taken up in issuing reminders and trying to trace addresses.

XIII.—Accounts 1915.

It will be seen that Rs. 4,500 had to be withdrawn from Fixed Deposit bearing interest at 4 p. c. in order to meet the current expenditure of the Institution. This would have been unnecessary if all members had paid their annual subscriptions.

XIV.—Books Presented to the Institution.

The acknowledgments of the Council for the following presentations are hereby recorded;—

TITLE.	AUTHOR.
Notes on Pushtu Grammar.	... ... Major A. D. 69th. Punjabis.
Lucknow, a large guide to,	... ... Major H. A. Ne- well, Indian Army Presented by the Authors.

◆◆◆◆◆

TITLE	AUTHOR
The Story of the Highland Regiments	... ... Frederick Watson.
The Adventures of a young Rifleman in the French & English Armies during the War in Spain & Portugal from 1806 to 1816.	... ... Written by himself Presented by Lt.-Col. Alban Wilson, 8th Gurkhas.

XIII.—Missing Journals.

The set of Journals of the U. S. I. of India in our library is deficient of Volume XII for the year 1883; also the copy of Volume I, for the years 1871-72, which we have is incomplete. The Committee would be glad if anyone in possession of the above copies will kindly communicate with the Secretary.

Books received.

Publishers:—GALE & POLDEN, LTD., LONDON & ALDERSHOT.

“The Young Officer's Guide to Military Law”, by F. J. O. Coddington M. A., LL. M., Barrister-at-Law. (Price s2/6 net).

“Artillery Map Reading and Elementary Gunnery made easy”, by Gunlayer and Coutour. Fully illustrated. (Price s3/6 net).

“Rapid Training of Recruits”, by an Instructor (Price s1/6 net).

“Scouting by night”, by Fredk. G. Cooke. (Price s1/- net).

“The value of Observation in War”, by Fredk. G. Cooke. (Price s1/- net).

DIARY OF THE WAR.

From 1st December 1915 to the 8th February 1916.



For Diary of the War regarding events from 28th June 1914 to 30th November 1915, see the Numbers of the 1915 and January 1916 Journals.

December 1st.—Prizrend has fallen to the enemy invaders in Serbia, and Monastir is more seriously threatened. The Austrians report more successes against the Montenegrins.

It is reported that large additional supplies of munitions have arrived at Rustchuk on the Danube. It is said that 40,000 Austro-German troops are to be sent there.

Reports from Persia published in Petrograd state that the Germans have collected under the eyes of the Government a huge quantity of military equipment and supplies at Ispahan and Hamadan.

Flight-Lieutenant Ferraud, R. N. A. S., with Air Mechanic Oldfield, in a seaplane, shot down a German Albatross seaplane off Ostend. The Albatross dived nose first into the sea and sank.

December 2nd.—At Monastir the situation of the Serbians is critical. They are said to be still defending the town, but the Bulgarians are reported to the south-east of it, on the Greek frontier. They have apparently cut the Monastir-Salonika railway at Kanali.

The French still hold to their positions in the Kavadar camp in the Vardar Valley. Beyond an exchange of artillery fire there has been no further fighting there.

The booty captured at Prizrend by the Bulgarians was considerable. They claim to have taken "from 15,000 to 17,000 prisoners" The Germans in their report yesterday gave them 15,000. The Bulgarians also claim to have taken 50 field-guns and howitzers, 20,000 rifles, 148 motor-cars, and a large quantity of other material.

December 3rd.—The policy of the Italian Government was defined at the meeting of the Chamber of Deputies yesterday by Baron Sounino, Minister for Foreign Affairs. He announced that Italy had joined the Pact of the Allies to make no separate peace, and that "as

far as it is within our power we must send help to the heroic Serbian people." Monastir has fallen.

December 4th.—The Prime Minister announced yesterday that our total casualties in all theatres of war up to November 9th were 510,230.

General Joffre has been appointed Commander-in-Chief of the French armies. This extends his command to the French forces in other theatres of war than the Western front.

December 6th.—The British force is in retreat from Baghdad. The Turks, defeated at Ctesiphon have been heavily reinforced. Our casualties have been 4,567.

On the night of November 30th General Townshend fought a rearguard action against greatly superior Turkish forces. He lost about 150 of all ranks. The troops have behaved with great steadiness, and the retirement—conducted in perfect order—had been carried to within a few miles of Kut-el-Amara when the latest reports were despatched.

Two river boats were disabled by shell fire and had to be abandoned. Their guns and engines were rendered useless.

There has been fighting between the Serbian rearguards and the enemy in Albania. Bulgarian troops, said the German *communiqué* yesterday, arrested the retreat of the Serbians south-west of Prizrend and defeated them. Captures of more than 100 guns and of a great quantity of war material (including 200 motor cars) are claimed.

December 7th.—General Townshend's force has reached Kut-el-Amara without more fighting.

Exploits of a British submarine in the Sea of Marmora were described by the Admiralty yesterday. She torpedoed and sank the Turkish destroyer Yar Hissar, rescued two officers and 40 men of the crew and placed them on board a sailing vessel, fired at and damaged a train on the Ismid railway, and sank a steamer of 3,000 tons and four sailing vessels carrying supplies to the enemy.

Enemy forces have invaded Montenegrin and Albanian territory. The Austrians crossed the frontier in their progress west and south-west of Novi Bazar, and the Bulgarians in their pursuit of the Serbians along the White Drin river. The latter reported yesterday that they overtook the Serbians in Albania on their flight towards Skutari.

December 8th.—The almost inevitable result of the enemy success at Monastir seems to have followed. Dispatches to the Italian Press announce the retreat of the Allied force in Serbia from Krivolak and the fortified camp at Kavadar.

They have retired to strong positions in the Demir Kapu Pass. This great gorge through which run the Salonika Uskub railway and the River Vardar, is rather more than 20 miles north of the Greek frontier.

December 9th.—Increased pressure on the Allied forces in Serbia is shown, though not with any certainty as to details, by to-day's news. The British force at Strumnitz was bombarded on Monday along its entire front. An infantry attack followed. It was repulsed, but was renewed on Tuesday. Our casualties are said to be slight.

The Bulgarians, according to their official report, are moving in three columns. One has occupied Resna. Another has defeated the Serbians on the road to Ochrida and is advancing towards that place. A third holds Dibra and is pursuing the Serbians south towards Struga, where they will be in danger of being intercepted by the Bulgarians on the Ochrida road.

Our losses in the action near Baghdad were 643 killed, 3,330 wounded, and 594 missing.

December 10th.—The Bulgarians, officered by Germans, are fiercely attacking the Allies in Macedonia. They are supported by artillery and are continually reinforced. The attacks were made all Wednesday, continued intermittently through the night, and were renewed with violence yesterday morning.

The Bulgarian attack penetrated some of the British advanced trenches on December 6th, it was beaten back, but on December 7th our troops were driven out of their positions by weight of superior numbers and were withdrawn under cover of darkness to a new line.

The French are also in retreat. The Bulgarians claim to have occupied the station of Demir Kapu, to have won successes on the west of the Vardar at Beshivitza and Petrovo, south of Strumnitz station. On the east of the river they are in the neighbourhood of Gradesk, so that both sides of the long French wedge into Macedonia are threatened.

Diary of the War.

Both from Paris and from Berlin hard fighting was reported yesterday on the Champagne front. The French counter-attack east of the Butte de Souain again pushed the enemy back. He now holds only a portion of the advanced trench which he captured, and even there is prevented from establishing himself by the constant fire of the French batteries.

December 11th.—The retirement of the Allies in Macedonia is being made "methodically and without much difficulty" according to last night's French *communiqué*. Bulgarian attacks have been repulsed with heavy losses to the enemy and the French on their new front are in touch with the British.

December 13th.—In Macedonia the Bulgarians are threatening Ghevigli, close to the Greek frontier. The main body of the enemy is some seven or eight miles farther north, held at a distance by the Allied guns. The retreat of the Allies has thus been carried close to the Greek frontier.

Important decisions as to operations in the Balkans have been taken by the Allied Powers as the result of the War Councils which have been held in France. The Salonika enterprise is to be prosecuted with all possible vigour and Salonika is to be held.

One British division had to fight its way back against very heavy odds. The gallantry of the troops, especially of three Irish regiments, enabled the withdrawal to be successfully accomplished. But the mountainous country compelled the sacrifice of eight guns, and our casualties were 1,500.

General Joffre has designated General de Castelnau for the appointment of Chief of Staff. General de Castelnau retains the rank of Commander of a Group of Armies.

Russian troops in Persia have won another success. On the roads leading to Hamadan they pursued the enemy and took his positions in the Sultan Bulak Pass.

December 14th.—The Belgian Government powder factory at St. Honorine, two miles from Havre, was blown up on December 11th. More than 100 workpeople were killed.

December 15th.—Messages from Greece show that the Allied troops have now completely retired from Serbia into Greek territory. All attempts by the enemy to envelop or cut them off

have failed. The Bulgarians are in Ghevigli and Doiran. The Allies have cut the railway behind them.

Salonika is being fortified with energy by the Allies. The Greek forces have been removed from Topshin, some way west of Salonika.

The Greek ships which have been detained at Malta are now to be released.

An air fight off the Belgian coast was reported by the Admiralty last night. One of our seaplanes chased and destroyed a large German seaplane. The British machine, severely damaged in the fight fell into the sea. The pilot, Flight Sub-Lieutenant Graham, and the observer Flight Sub-Lieutenant Ince, were both rescued.

General Sir Horace Smith-Dorrien is to take supreme command of the British forces in East Africa. The appointment was announced by Mr. Tennant in the House of Commons yesterday.

December 16th.—General Sir Douglas Haig has been appointed to succeed Sir John French in command of the British Army in the West. Sir John French who returns from France at his own request is to command the troops in the United Kingdom.

A British force under Colonel Gordon operating 24 miles west of Matrub, in Western Egypt, encountered a force of Arabs on Monday. The enemy—estimated at 1,200 men with guns and machine-guns—attacked vigorously, but was repulsed with heavy losses.

The French *Communiques* yesterday described the work of airmen. A combined French and British squadron bombed the German aviation ground at Hervilly. The German aviation camp at Hibbsheim, east of Mulhouse, was also bombarded by 13 French planes.

December 17th.—General Townshend reports that in the attack against our positions at Kut-el-Amara made on December 12th the Turks, according to Arab reports, lost 2,000 men. He cannot confirm this, but estimates that the losses of the Turks were fully 1,000. They have not renewed their attacks since December 12th.

The response of the French people to M. Ribot's appeal to them last May to bring gold to the Bank in exchange for notes

has been most striking. £50,000,000 has been deposited.

December 18th.—The German Minister at Athens has declared that the fortifications which the Allies are constructing at Salonica compel Germany to take action in Greek territory and drive the Allies out.

The Greek Prime Minister has replied that in no case will Greece allow Bulgarian troops to set foot on Greek soil.

A considerable success for the Russians in their new Persian campaign is reported by the Grand Duke Nicholas, commanding the Russian Armies in the Caucasus.

There have been two chief centres of disaffection in Persia, Hamadan, south-west, and Kuni, south-east, of Teheran. At these two points the German intriguers have been doing their best to stir up trouble for the Allies in Persia.

Now the Russians have occupied Hamadan and the German partisans at Kuni have taken to flight. The Russian Army which is conducting this campaign has struck almost due south from Kazvin, near the coast of the Caspian. Its success at Sultan Bulak, reported some days ago, made the fall of Hamadan almost certain.

December 20th.—The British Headquarters' report last night showed that the Germans have again found an opportunity of using gas against our lines.

The attack was made north-east of Ypres. Our protective measures proved effective, and our line is intact. Only in a few places did the enemy troops succeed in leaving their trenches under our fire. Even there they were driven back before reaching our line.

It is officially announced in Berlin that the German cruiser Bremen and a torpedo-boat accompanying her have been sunk by a submarine attack in the Baltic.

A German seaplane has been hit and brought down by a French torpedo-boat off the Belgian coast. Its occupants were captured.

A Serbian *communiqué* alleges that during the Serbian retreat they suffered greatly at the hands of Musulmans in New Serbia, who were armed by the Austrians and Bulgarians.

The Greek commanders are reported to have instructions to retire, if the Allied troops are followed by their enemies on to Greek soil, "in order to leave the field clear to the beligerents."

December 21st—A withdrawal of our troops in Galipoli from two of their positions has been effected. Anzac and Suvla Bay are the positions evacuated.

The whole operation has been brilliantly carried out. The losses were insignificant. It appears that the enemy actually did not discover that the forces opposed to them were being withdrawn.

Another report from General Townshend at Kut-el-Amara was published last night. On the night of December 17-18 British and Indian troops surprised the Turks in their advanced trenches. They killed about 30 and took 11 prisoners. General Townshend estimates that in the actions on December 1st and during the night of December 12-13 the Turks must have lost not less than 2,500 men. All was quiet on December 18 and 19th.

Bulgarians and Greeks have come into collision in Albania. The Greek Government admit this but protest that order has been restored. There were wounded on both sides, but no killed.

December 22nd.—Mr. Asquith referred to the retirement in the House of Commons yesterday. He revealed the amazing fact that only three casualties—two military and one naval wounded—were sustained. Six guns had to be left behind, after being destroyed, and a relatively small portion of stores was abandoned.

Russian warships, escorting 16 transports, have attacked Varna on the Bulgarian Black Sea coast. So far as is known no Russian landing has taken place.

A British submarine has sunk the German steamer *Ieros* and other craft in the Sea of Marmora.

Lieutenant-General Sir William Robertson has been recalled from France to assume the duties of Chief of the Imperial Staff. He succeeds Lieutenant-General Sir Archibald Murray, who is about to proceed to an important command.

General Ruszkey has been relieved by the Tsar of his command of the Russian Army of the north. General Ruszkey's health has again been affected by his labours. The Tsar thanks him

for his brilliant achievements, and hopes to see him again at the head of his troops. He retains his position as member of the Council of Empire and of the Supreme Council of War.

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The big fight was near Sheikh Saad, 25 miles across the desert to Kut and 40 by river. The Turkish account, which gives the British losses as 3,000, says the relief expedition was aided by the fire from four war vessels.

General Sir John Nixon has been compelled to relinquish command of the Mesopotamian forces owing to ill-health, and will return home. Lieutenant-General Sir Percy Lake, Chief of the General Staff in India, succeeds him.

The Germans are continuing their attacks to wrest back the ground taken from them in Champagne by the great attack of September. On a five-mile front south-east of Tabure, framed round the Butte de Mesnil, four actions were fought during Sunday night.

The Austrians are pressing their offensive in Montenegro up the valleys of the Tara and Lim in the north and against Mount Lovtchen, overlooking the Bay of Cattaro, in the south.

January 12th.—The Austrians say that they have captured Mount Lovtchen. The news reaches us in a message from Holland which gives the substance of a bulletin issued in Vienna.

Mount Lovtchen commands on the west the Austrian port Cattaro, with its excellent natural harbour, and on the east Cettigne, the capital of Montenegro. Its possession has always been one of the main aims of Austro Hungarian policy.

A dispatch from Basra giving more details of the battle on January 7th is published. Our cavalry got in behind the trenches on the Turks' left flank at Sheikh Saad, and captured a whole battalion—over 550 officers and men—and two mountain guns.

The British infantry also behaved with great gallantry, and the guns frustrated an attempt by the enemy's cavalry to envelop our right. Our casualties were heavy, but many of the wounds—most caused by rifle-fire, some by shrapnel—are slight.

January 13th.—The Italians are at Durazzo and Avlona on the Albanian coast.

The French have landed at Corfu to prepare for the Serbian army.

The second reading of the Military Service Bill passed the House of Commons last night. A motion for its rejection was defeated by a majority of 392. The minority against the Bill has dwindled to 39.

January 14th.—The Allies have blown up the bridge over the Struma at Demir-Hissar, which carries the railway from Salonika, through Bulgaria, to Constantinople, and also that at Kilindir.

January 15th.—The Austrians are in Cettigne, the capital of Montenegro. Its fall, after the capture of Mount Lovtchen, was inevitable. If the Austrian account is to be believed, the enemy entered Cettigne without much resistance, and the town is undamaged.

According to a Wireless Press message from Rome, Austria has offered Montenegro an armistice, in order to negotiate a separate peace.

The French submarine Foucault has sunk an Austrian cruiser off Cattaro.

January 17th.—Lille has been shelled by the British, who before this seem to have refrained from firing upon it. The German dispatch yesterday reported that shells had fallen upon the interior of the town, but that only slight material loss caused by fire had been occasioned.

The German dispatch also alludes to the shelling of Westende on the Belgian coast by an enemy monitor, and again says that there was no result. As for the rest of the Western front, the French said yesterday that there was nothing to report. Their *communiques* on Saturday showed a similar state of affairs.

The British force under General Aylmer, advancing to the relief of Kut-el-Amara, have fought another action. After their defeat on January 8 and 9 the Turks retired to a position 25 miles down the Tigris from Kut. There they were attacked by the British on January 13th.

Fighting continued all that day.

In Persia there has been a conflict between Russian and Turkish troops at Kangavar, half-way between Hamadan and Kermanshah. The Russians have occupied the town of Kangavar, and have taken some prisoners.

January 18th.—The position of our forces in Mesopotamia up to Sunday morning was defined by Mr. Austen Chamberlain in the House of Commons yesterday.

The Turks who are opposing the British Relief Expedition for Kut were defeated on January 13th at what is known as the Wadi position, about 25 miles down the Tigris from Kut. The Wadi position is now in the hands of the British, who now have their headquarters there.

The enemy's rearguard has taken up a new position at Es Sinn, between the relieving force and Kut. General Aylmer has been able to send all his wounded down the river, but reports that he has been much hampered in his operations by the wet weather.

British Headquarters announced last night that a combined attack with bombs, rifle grenades, and trench mortars had been made upon the enemy's trenches at Givenchy with excellent results.

South of Pinsk the Russians have made considerable inroads on the enemy lines. Kukhotska Volia has been cleared of its troops. In several sectors of the front in this region the Austro-German front has been pierced, and the Russian advance continues.

January 20th.—The Russians, in a dispatch which reached us late last night, report a considerable success by their troops in the Caucasus. The Turkish line has been broken over a front of about 70 miles, and the enemy is in full retreat towards Erzrum.

His retreat broke at times into a rout, and he lost whole units.

It is reported by Vienna that a new battle is developing in the Bukovina, the Russians having renewed their offensive.

A Council of Ministers of the Allies met in London yesterday. It was attended by Mr. Asquith and M. Briand, the French Prime Minister. The Chief of the French General Staff and the French Minister of Marine were also present, with others.

January 21st.—Mr. Austen Chamberlain has received a telegram from General Townshend, commanding our troops at Kut. No fighting or firing has taken place there.

The Russians, who have recently issued very meagre reports of the fighting on their south-western front, yesterday announced a definite success in the Bukovina. North-east of Czernowitz, in the region of Rarancze, the official report says, "we captured a

sector of the enemy's position. With the object of recapturing this sector, the enemy made five desperate counter-attacks, which were all repulsed with enormous losses."

The victory of our Allies on the Caucasian front is important. The enemy abandoned his positions for 60 miles, and in his retreat is suffering heavy losses in men and material.

The report from British Headquarters last night also spoke almost solely of air-fights. Two enemy machines were driven down; one British aeroplane was lost; and an enemy aeroplane dropped three bombs on an "unimportant village" behind the British lines.

Warships bombarded Dedeagatch again on Tuesday, causing considerable damage. A train was destroyed and several warehouses were set on fire.

The latest report about Montenegro is that negotiations between King Nicholas and Austria-Hungary have been broken off.

The Military Service Bill passed through Committee in the House of Commons yesterday. A proposal to exempt members of the Territorial Force was rejected on a division, and an amendment to make clergy and ministers of religion liable to service was withdrawn.

January 22nd.—The Turks have tried in vain to stem the Russian advance in the Caucasus. After a counter-attack on a wide front they were again repulsed with heavy losses. The Russians, says the official report, have now driven the fleeing enemy as far as the forts of Erzrum, sabring and taking prisoners over 1,500 Turks.

The Russians, in the process of clearing the country to the west and south Teheran of Persian rebels, have now taken the town of Sultanabad.

On January 18th reports were received that the Germans had evacuated two important posts in South Cameroon, and the German Governor and Commandant of the Forces had escaped into Spanish territory. Several Allied prisoners have been rescued from the enemy.

Two Austrian airmen, whose seaplane had fallen, were captured by a British submarine off Grado. An Austrian destroyer which attempted to interfere was torpedoed by the submarine.

January 24th.—In Mesopotamia General Aylmer attacked the enemy opposing his march to relieve Kut-el-Amara, at Essin, on January 21st. The weather was atrocious, and pouring rain made the movement of troops very difficult.

"Fierce fighting, continued during the day with varying success." Floods made it impossible to renew the attack on January 22nd. Casualties on both sides "are reported to have been very heavy."

The Russian Army in the Caucasus has pursued the defeated Turks to Erzrum. The forts of Erzrum are being shelled by the Russians.

Yesterday two French air squadrons—a total of 24 machines—bombed the railway station and barracks at Metz. These aeroplques were escorted by two protecting squadrons, the pilots of which fought 10 actions with Fokkers and Aviatiks; one French machine was compelled to land near Metz.

Hostile aeroplanes made two raids on the East Coast of Kent yesterday. First, in the bright moonlight at 1 o'clock in the morning, came one aeroplane. It dropped nine bombs and made off seawards, having killed one man and having wounded slightly two men, one woman, and three children.

Then, just after noon, two more hostile machines appeared, designing to attack "the same locality." They were met with heavy fire and disappeared, pursued by our naval and military machines. They did no damage and caused no casualties.

January 25th.—Hostilities between the British force advancing to the relief of Kut-el-Amara and the Turks were suspended for a few hours on Saturday. An armistice was concluded for the removal of the wounded and for the burial of the dead.

Meanwhile anxiety about the position of General Townshend and his men at Kut is relieved by the announcement that he has reported that he has sufficient supplies and that his troops have not been further engaged.

Some indication of the difficulties of the relief force is to be found in the fact that the Tigris during the last 48 hours has risen 7ft at Kut and $2\frac{1}{2}$ ft. at Amara. The floods prevent all movement of troops by land.

According to a report issued in Vienna, Skutari has fallen to the Austrians, who are over-running Albania and begin to threaten the Italians established at Durrazzo and Avlona. They are at Berat, whence a march to the coast will place them between these Italian garrisons.

Mr Tennant in the House yesterday reviewed the work of the hostile air-fleets in the West. We have lost 13 aeroplanes in the last four weeks, and we know that the enemy has lost nine. His losses should probably be increased by two. Of our machines 1,227 have crossed the German lines; of the German machines 310 have crossed our lines.

In six bombing raids we have used 138 machines. The Germans, in 13 raids have used only 20. All aircraft fighting has been over or behind the German lines. Their machines, when injured, can plane down behind their lines, ours have to face the prevalent westerly gales and cannot get home.

The Military Service Bill passed its third reading in the House of Commons last night. The majority was 347. Only 36 members voted in the minority.

January 26th.—There has again been severe fighting in the West, particularly just east of Neuville at the point where the road from Neuville to Thelus intersects that from Arras to Lens.

In Belgium the guns on both sides have been active.

Last night's Paris report referred to a violent bombardment of enemy works in Belgium. In Artois several enemy batteries were silenced. Two German aeroplanes dropped bombs on Dunkirk, five people being killed and three injured.

The Admiralty announced yesterday that a German seaplane was forced by a British machine to come down to the water off the coast of Belgium yesterday morning.

January 27th.—The attack on the Allies at Salonika is still delayed. Meanwhile the Austrians hold much of the interior and the whole coast-line of Montenegro. They are now sweeping Albania from the north and east.

The fall of San Giovanni di Medua, one of the Albanian ports in the north, was reported yesterday. At Durazzo the Albanians loyal to the Allies, under Essad Pasha, are threatened by an Austrian and Bulgarian column marching north-west from

Berat, while another enemy column is directed against the Italians at Avlono.

The German offensive in the West has been brought to a stop, but a violent cannonade still goes on, and the French reported last night that the enemy had exploded more mines.

Our aeroplanes on Tuesday attacked 27 hostile machines and three captive balloons. All our men, British Headquarters announced last night, came back safely. They forced down two aeroplanes and two balloons.

The first dispatch has been received from Sir Horace Smith-Dorrien, now in command of an East African force. An enemy camp near Mbuyuni, about 30 miles on the British side of the East African frontier, has been occupied. The enemy was driven off.

January 28th.—A strongly-worded protest from the United States Government against the British search of mails for contraband articles was published yesterday. The British Government has replied that on the question of principle it is consulting the Allies and that as to the facts no mails have been censored or removed from neutral ships brought forcibly into port for purposes of search.

From Mesopotamia General Townshend, commanding the British force at Kut, reports that the enemy have evacuated "their trenches on the land side of Kut defences." The important point seems to be that the enemy has retired about a mile from our entrenchments.

January 29th.—British Headquarters reported last night an attack by enemy infantry against a salient in our lines north-east of Loos. It was driven back by our fire.

The night French *communiqué* indicated some heavy fighting near Arras. Four enemy attacks were launched only one of which achieved any success. In this case Germans obtained a footing in the advanced French trenches to the south of Givenchy.

Official announcement was made last night about victory over the Senussi in Western Egypt on January 23rd. The enemy's losses were heavier than was thought, and included some Turkish officers.

The severe defeat of the Senussi has greatly discouraged the local Bedouin with the Senussi. They are said to be deserting and returning East.

The enemy on the Russian front is making great use of mechanical war instruments. He is said to have increased enormously the number of machine-guns on the Bukovina front.

In Turkish Armenia the Russians have taken the offensive in a new direction and have penetrated to a point 70 miles from the frontier, between Erzrum and Mush.

January 31st.—The Germans, in their series of local attacks in the West which have been insistent in the past week, have at last scored a definite success at Frise on the River Somme.

Their attacks, which began near the Belgian coast and spread from sector to sector—the north of Ypres, Givenchy, Loos, Neuville, and other places were threatened in turn—suggest that they were testing the strength of the French and British line, and having found a weak spot pushed on and scored a local success.

These attacks, too, bear out what has become palpable in this war—that the enemy will never rest content with a defensive position on every front.

The main weight of the German attack fell on the Allied line in the neighbourhood where the French and British fronts join. The French admit that it carried the village of Frise, in the valley of the Somme, and yesterday they spoke of another attack a little to the south near Dompierre. This was repulsed.

On the British front the Germans broke into our saps near Carnoy. They were driven out again. The enemy claims that in his success at Frise he advanced about 1,100 yards over a front of 3,800 yards and took more than 1,000 prisoners.

A Zeppelin raided Paris on Saturday night at 10 o'clock. The attack lasted two minutes. In that brief time 13 bombs were dropped, all within half a mile of each other. Twenty-three persons were killed and 30 injured.

The night was favourable for a raid. A slight mist hid Zeppelin—flying at a height of 10,000 ft.—from searchlights and from aeroplanes. Five French aeroplanes, however, did locate the raider, and one approached and attacked it.

The Cape and fort of Kara Burun—commanding the harbour of Salonika—has been occupied by troops and naval detachments of the Allies. The Greek troops have evacuated it. The action of the Allies is due to the fact that a British transport had been torpedoed by a

German submarine under the guns of the fort.

February 1st.—Early this morning the news that English counties were last night visited by six or seven German airships was made public by the War Office. Although bombs were dropped the damage done is at present believed to be inconsiderable.

Another Zeppelin attacked Paris on Sunday night, and dropped bombs without doing any damage or causing any injuries.

Our men broke into the German trenches on Sunday night, found them full of Germans, inflicted about 40 casualties, and returned with three prisoners and two machine-guns.

Two German destroyers grounded on Sunday morning between the Kattegat and the Baltic, near the spot where the British submarine E13 was lost. They were got off by the help of other German warships within the 24 hours limit.

February 2nd.—The Zeppelin raid on Monday night was on a large scale. The raiders, after they had crossed the coastline, seem to have steered various courses and penetrated some way inland.

About 220 bombs were dropped in six counties—Norfolk, Suffolk, Lincolnshire, Leicestershire, Staffordshire, and Derbyshire. The theory of the authorities is that the raiders were hampered by the thick mist. Except in one part of Staffordshire, no very considerable material damage was done.

Nowhere was there any military damage.

The Germans are enthusiastic about the results of the raid, claiming that they have bombed the shipping and docks of Liverpool and Birkenhead, the industrial works of Sheffield, &c., and that the results of the attacks were manifest in explosions and fires.

Another report from General Sir Horace Smith-Dorrien, commanding in East Africa, was issued yesterday. Good progress is being made with the branch railway from Voi. It has now been pushed on to the site of an enemy camp west of Mbuyuni which was captured by our troops on January 24th.

February 3rd.—Another official notice issued last night shows that 59 were killed and 101 injured. The number of bombs dropped, known at present, exceeds 300. Many fell in rural places and caused no damage.

The latest information from General Aylmer, commanding the relief expedition in Mesopotamia, is that he holds a strong position on the Tigris. The recent floods make it impossible for him to move forward at present.

All is well with General Townshend at Kut. He is in daily communication by wireless with the relief force. On his north-west front the enemy have fallen back some 2,000 yards.

The latest news from Cameroon shows that German territory is practically cleared of the enemy, but that he has retreated into Spanish Guinea, that is to say, over the south-western border of the German Colony.

February 4th.—There is good reason to believe that a Zeppelin has been destroyed in the North Sea.

The announcement said that a fishing trawler had reported yesterday to the naval authorities that she had seen a "German Zeppelin" in the North Sea in a sinking condition.

The Germans spoke yesterday in their bulletin of vigorous artillery action over a wide front. Considerable emphasis is laid in this enemy bulletin on the extreme violence of the bombardment by the Allied guns.

The enemy claims to have occupied the craters caused by the explosion of two British mines north-east of Hulluch, and to have shot down a British and a French battle-aeroplane near Peronne.

A Zeppelin attempted to make a second raid on Salonika on Wednesday evening. It was fired on by British batteries and had to retire.

The Military Service Bill was promulgated yesterday. It is to come into operation on February 10. Regulations as to the constitution, functions, and procedure of the tribunals were issued yesterday.

February 5th.—The Germans admit the loss of the Zeppelin wrecked in the North Sea. Their Admiralty issued yesterday an official statement that the airship did not return from "a reconnoitring cruise."

The *communiques* from Paris and Berlin show little activity on the Western front. That from Paris yesterday afternoon was almost wholly destitute of news; that from Berlin recorded the explosion of another British mine near Hulluch and claimed

the capture of a French biplane with its pilot, who had lost his way.

The allied columns in Cameroon are closing in on the remnant of the Germans. Many of the enemy have retired over the frontier of Spanish Guinea, which French columns are now approaching.

Difficulties with Sweden about imports by sea appear to be less acute. The Foreign Office announced yesterday that there was reason to think that their suspicions about the cargo of the Swedish ship Stockholm were unfounded.

February 7th.—The French *communiques* of Saturday and Sunday showed that two German aeroplanes have been destroyed, and said that French guns destroyed German gas receptacles, whose fumes spread over the enemy's lines.

Friday's *communiqué* from Petrograd speaks chiefly of German aeroplane and Zeppelin flights over the Russian lines near Dvinsk, and of scouting and outpost actions without much consequence at other parts of the front.

The Austrian official reports allege that the enemy's advance guards are about 25 miles north-east of Durazzo in Albania. It seems that negotiations between Austria-Hungary and Montenegro have not begun because there is no one with authority to negotiate on behalf of Montenegro.

February 8th.—Hostilities on the Bukovina frontier have begun again between the Russians and the Austrians. The fighting was desperate and bloody, the Russians doing great execution with the bayonet. The enemy's casualties in a single engagement were 2,000 killed.

The German bulletin yesterday said that there had been fierce artillery battles between the La Bassee Canal and Arras, as well as to the south of the Somme. Lens has again been violently bombarded by the Allies.

Effective practice by the French artillery was again reported in the *communiqué* issued in Paris last night. North-east of Arras big explosions were caused in the German lines, while at one point in Champagne a bombardment of enemy establishments by heavy artillery resulted in an "extensive conflagration."

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H. G. PEARSON, Barrister-at-Law.

E. WESTON, Meerut.

FUNDS	£13,700,000
ANNUAL REVENUE	£1,590,000
BONUSES DECLARED	...	...	...	...	£8,170,000
CLAIMS PAID	...	...	...	...	£32,200,000

Chief Medical Officer :

LIEUT.-COL. R. BIRD, C.I.E., M.V.O., I.M.S., Calcutta.

Solicitors :

SANDERSON & COY.,
CALCUTTA.

Bankers :

The
BANK OF BENGAL.

Secretary :

W. E. HILL,
CALCUTTA.

RECEIPTS.	AMOUNT.			TOTAL.		
	Rs.	A.	P.	Rs.	A.	P.
Government Grant-in-Aid				1,041	4	6
Subscriptions and Donations—				1,800	0	0
Arrears				3,529	4	0
Entrance Fees				439	4	3
Current Subscriptions				612	1	8
Subscriptions in Advance				379	11	0
Life Members' Subscriptions				2,535	14	6
Interest on Fixed Deposit and				167	6	6
Bombay Port Trust Debenture				300	0	0
Sale of Catalogues				184	14	0
,, Journals				7	8	0
Advertisements	on			0	14	0
Tactical Schemes				31	0	0
Military History Papers				179	2	6
Postage { Recovered				7,278	2	6
{ Foreign				1,085	0	0
Miscellaneous receipts				1,289	15	0
Commission on cheques				128	2	1
Sale of periodicals				73	8	0
Transfer from Fixed Deposit				214	2	2
Army List pages				176	10	9
Bank Balance Dr.				977	12	0
Uncashed cheques				89	12	0
ys				274	2	11
war				243	0	0
...				359	0	0
...				862	5	0
...				379	6	0
...				250	0	0
Total Rs.				24,889	3	4

S. M. RICE, Major,
Secretary, U. S. I. of India,

SIMLA,
12th February 1916.

N OF INDIA.

December 1915.

Item	ASSETS.	AMOUNT.			TOTAL.		
		Rs.	A.	P.	Rs.	A.	P.
of U. S. I Building 1st January 1915	25,078 15 3						
ions and repairs during 1915	...	...	...	...
2	25,078 15 3						
ciation at 1½%	375 15 3						
of Library Books 1st January 1915	8,590 13 6						
ases and rebinding	2,385 15 3						
	10,976 12 9						
eciation on new books at 50%	1,192 12 9						
1st January 1915 (revaluation)	2,406 0 0						
isitions during 1915	324 0 0						
	2,730 0 0						
of Furniture & fittings 1st January 1915	5,219 15 0						
ases and repairs	167 6 6						
	5,387 5 6						
eciation at 6%	323 5 6						
of Pictures & Sculpture 1st January 1915	5,139 0 0						
eciation at 3%	154 0 0						
of Medals 1st January 1915	1,679 12 0						
of Trophies 1st January 1915	1,188 0 0						
ntations	135 0 0						
	1,323 0 0						
eciation at 1%	13 0 0						
of 1912 Bombay P. T. Debentures at par	3,000 0 0						
Deposits with Alliance Bank 1st							
uary 1915	7,500 0 0						
drawals	4,500 0 0						
with Secretary	...	....	...	...
's due by Members—	Rs.						
from 1st January 1915 = 2,553							
previous to January 1915 = 3,924							
Subscribers	6,477 0 0						
Advertisers	475 0 0						
Members killed	270 0 0						
	273 0 0						
	7,495 0 0						
Total Rs. ...	...	....	...	...	64,130	2	0

S. M. RICE, Major,

Secretary, U. S. I. of India.

ditor.

No.	RECE.	AMOUNT.			TOTAL.		
		Rs.	A.	P.	Rs.	A.	P.
1	By Subscriptions, Library	1,800	0	0			
2	" Advertisement	3,500	0	0	5,300	0	0
3	" Casual Sales of	500	0	0			
4	" Sale of Catalogs	600	0	0			
5	"	600	0	0			
6	" Government G	250	0	0	1,950	0	0
7	" Interest on fixed						
8	Port Trust	300	0	0			
9	" Entrance Don	150	0	0			
10	members Jaxes	250	0	0			
11	" Entrance Dought and Heat	150	0	0			
12	(bers) nce .	200	0	0			
13	" Subscriptions (pairs	100	0	0	1,150	0	0
14	" "				200	0	0
15	" Miscellaneous						
16	" Arrears recovres and maps	1,250	0	0			
17	nd Repairs	250	0	0	1,500	0	0
18							
19		5,500	0	0			
20		1,500	0	0			
21		1,000	0	0	8,000	0	0
22							
23					300	0	0
24					700	0	0
25					80	0	0
26					250	0	0
27	of the war				720	0	0
28							
29	Balance	...			492	0	0
30							
31	Total Rs.	...	...	...	20,642	0	0

SIMLA,

S. M. RICE, *Major,*

1st March 191

Secretary, U. S. I. of India.

L FUND.

in 1915.

TE.	RECEIPTS.	AMOUNT.		TOTAL.	
		Rs.	A. P.	Rs.	A. P.
Jy ry	1 By Balance brought forward ...			381	11 2
J	3 „ Interest on G. P. notes for Rs. 2,000 for $\frac{1}{2}$ year ...	33	13 5		
A st	13 „ Interest on G. P. notes for Rs. 4,300 for $\frac{1}{2}$ year ...	73	2 5		
	14 „ Interest on G. P. notes for Rs. 2,000 for $\frac{1}{2}$ year ...	33	13 5		
	6 „ Interest on G. P. Notes for Rs. 4,300 for $\frac{1}{2}$ year ...	73	2 5		
		-----	-----	213	15 8
	Total ...	...	.....	595	10 10

DECEMBER 1915.

ASSETS.	Rs.	A.	P.
Government Pro. Notes (at par).	6,300	0	0
Cash in hand	0	14	6
Bank balance	365	0	4
Total Rs.	6,665	14	10

R,

S. M. RICE, Major,

Secretary, U. S. I. of India.

The Journal OF THE United Service Institution of India.

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No. 203.

TWELVE MONTHS OF THE WAR ON THE EASTERN FRONT.

Perplexity probably expresses the feelings of those who, in a whole year of war, have followed the operations of the Russian armies in Poland and Galicia in the news as it has reached us daily from the front. With almost incessant movements on one side or the other; with invasions and counter-invasions; with advances and retirements sometimes alternating, sometimes co-incident, sometimes in one part of the vast theatre, sometimes in another, at other times proceeding simultaneously, the feeling of bewilderment is intelligible. The disentanglement of these operations is the aim accordingly of the following review of the first year of the war on this front. Whilst the summary may be of assistance to those who are interested in the operations in their purely military aspect, it may further enable us all to realize the part our Russian allies have played, and are playing, in the great war and in the common cause.

The concentration of the Russian forces destined for the initial stages of the campaign in August 1914 was carried out in three principal areas; on the north, facing the frontiers of East Prussia behind the rivers Niemen, Bobr and Narew from Vilna to Warsaw; south of Warsaw, at Lublin, facing the northern frontier of Galicia; and to the south east in the provinces of Volhynia and Podolia, facing the north-eastern and eastern borders of Galicia. These areas indicate the Russian plan of campaign, which was the simul-

taneous invasion of East Prussia and of Galicia. A glance at the map explains the reason of the absence of any concentration of troops west of the Vistula in the direction of the eastern frontier of Germany, and of any initial offensive movement on the part of Russia in that direction. East Prussia in the north, and Galicia in the south are like the claws of a pincer, and before Russia could advance westward it was essential that she should clear her flanks.

As to the Austro-German plans, whilst a general defensive on the Eastern front was indicated as regards, and as compared with, a general offensive in the West, which initial defensive attitude was adopted by the German partner on the whole of his Eastern frontier, it is not so clear whether the Austrians were to take up a similar passive attitude, and await the enemy's advance within their own borders. It has been claimed that, in the first instance, it was Austria's intention to take the offensive and to advance, simultaneously both northward and eastward from Galicia, and the claim is sustained to a certain extent by the abortive invasion of south Poland by General Dankl's 1st Austrian Army, the first and opening event of the war on the Eastern Front. But the real intentions and plan of campaign of Germany and Austria in this theatre will only be known when the history of the Great War is compiled, and published, by the War Offices of the two Powers.

The Russian invasion of Galicia and East Prussia.

Although in point of dates the Russian offensive in the northern theatre preceded by a day that in the south, the operations in the latter area may desirably be considered first. They were not only on a greater scale, but the results obtained were of still greater importance both from the military as well as from the political point of view, namely, the seizure and occupation of a considerable portion of the enemy's country. In the matter of dates the operations in this theatre may also be given precedence for they opened with the offensive

taken by the 1st Austrian Army, already referred to, which began on the 10th August 1914.

(a) *The Russian invasion of Galicia.*

The disposition of the Russian forces was as follows :—

**Disposition of Russian and Austrian Armies.
see Sketch A.**

(a) 1st Army (Ivanoff), 400,000, on the line Lublin—Cholm.

(b) 2nd. Army (Ruszky) 300,000, about Dubno.

(c) 3rd Army (Brusiloff) 300,000 and 5 cavalry divisions, on the Eastern Galician frontier East of Tarnopol.

On the Austrian side, going from left to right.

(a) 3rd Army (Archduke Joseph Ferdinand), strength unknown, was at Cracow.

(b) The 1st Army (Dankl) 7 corps 350,000, was at Przemysl.

(c) The 2nd. Army (Auffenberg) 5 or 6 corps, 300,000 and 5 cavalry divisions east of Lemberg.

As they were to take the first forward step priority of consideration may be given to the operations of the armies of Dankl and the Archduke. Their operations were, moreover, not directly connected with those of their 2nd Army and it will clear the ground to consider them first. It was on the 10th August, 1914 that Dankl

Operations of the 1st and 3rd Austrian Armies, and of the 1st Russian Army.
10th August.

from Przemysl, and the Archduke from Cracow crossed the frontier advancing northward. The front of Dankl's line of advance was from the Vistula on his left to Zamosc on his right. The Archduke's front stretched from the west bank of the Vistula to Kielce. The *communiques* of those early days were not very communicative. From Vienna we heard of victories at Krasnik and Kielce, but little news came from the other side. Whether any serious opposition was offered to the Austrian advance or not, it proceeded very slowly, Dankl taking more than three weeks to cover the distance between Tarnograd

and Lublin. On the 2nd September his front of 70 miles extended from the Vistula near Opole, through Krasnostaw, to some 15 miles east and south-east of Zamosc. Across the Vistula level with it was the 3rd Austrian Army, but considerably reduced in strength, the greater part of it having been sent from left to right to Tomaszow to fill the gap between the right of the 1st Army and Auffenberg's left, which towards the end of August was being hard pressed by the Russian Southern armies, as will be seen later.

It has been urged that the passive attitude of the 1st
4th September. Russian army at Lublin was designedly

adopted and that it was awaiting developments in East Galicia before moving. Whether this was the reason, and not backwardness in mobilization in this area, it was not until the 4th September that Ivanoff moved. When he did at last strike, he struck hard, the force of his blow being directed against Dankl's centre and left between Krasnostaw and the Vistula, driving it back on to the line Krasnik—Janow while his own left wheeling between Zamosc and Tomaszow thrust back the Archduke Joseph Ferdinand (who as already stated had moved across to this flank) to Bilgoraj.

On the 12th September the retreating Austrians
12th September. reached the San between Sandomir and Tarnograd suffering heavy losses in the crossing of the river here and on the San. The left of Ivanoff's first Russian Army joined hands with the right of their 2nd Army who with the 3rd Army had been simultaneously driving back the 2nd Austrian army from the borders of Eastern Galicia. Although Dankl had taken three weeks to advance from the frontier to Lublin, his retirement over the same ground only occupied eight days, but his retreat had been hastened not only by the pressure in his front, but by the situation in his rear, for two days before he began to fall back the 1st Austrian army in Eastern Galicia had been heavily defeated before Lemberg and was also retiring.

Exactly a week after Dankl and the Archduke Joseph Ferdinand crossed the frontier in their ad-

Operations of the 2nd Austrian Army, and the 2nd and 3rd Russian Armies. vance against Lublin, the 2nd and 3rd Russian Armies facing the eastern frontier of Galicia, began, on the 17th August, their

advance against the 2nd Austrian army, which was deployed on the Bug and Zlota Lipa rivers on the line Kamionka—Busk—Zloczow—Brzezany, with its right on the Dniester. Ruszky and Brusiloff both crossed the frontier on the same

22nd August. day, August 22nd, the former at Brody and

the latter 20 miles east of Tarnopol, the Austrian advanced detachments falling back slowly. Auffenberg's centre and right was heavily engaged with Brusiloff's 3rd Army on the 25th and 26th August at Brzezany and all along the Zlota Lipa river, and when Ruszky's left formed a junction at Zloczow on the 27th, Auffenberg fell back on a prepared position east of Lemberg which stretched from Busk

Battle of Lemberg 27th August to 2nd September. on the Bug, south along the Gnila Lipa river to Halicz on the Dniester, a front of

70 miles. For seven whole days a furious battle raged on this line, the end being brought about by the piercing of the Austrian right at Halicz on the 31st August. Their centre and left continued to show a bold front for two more days, but the defeat of the Austrian right wing was complete, and its retreat across the Dniester at Halicz and Chodorow towards Stry, a rout, its losses amounting to 70,000 prisoners and 200 guns. His left flank threatened

The battle of Grodek 8th—14th September 1914. north of Lemberg by Ruszky, Auffenberg then fell back on to another position west

of that city with his left at Rawaruska on the northern frontier of Galicia, his centre at Grodek, and his right on the Dniester, where he received reinforcements and was able to make as prolonged a stand on this line as he had done east of Lemberg. The Austrian defence was as obstinate and the fighting as furious as in the battle of Lemberg, but Auffenberg was overmatched, and his left being this time

forced back by Ruszky at Rawaruska, a retreat on Przemysl was necessitated, on to which place he fell back on the 15th September—on which date the defeated Dankl and the Archduke were being driven back west of the lower San, and Ivanoff's Army was on the railway connecting Przemysl with Cracow. On the 18th September the Russians had reached Sainbor to the south and Jaroslav north of Przemysl.

Investment of Przemysl, 23rd September 1914. On the 23rd September, when Ivanoff's Army in pursuit of Dankl had reached the Wisloka river, the investment of Przemysl not only was completed but Cracow was being threatened, and very nearly the whole of Galicia was in Russian occupation down to the Carpathians.

Ignorance of the real intentions of those in whose hands lay the direction of the operations in Galicia necessarily lessens the value of comment on these operations. The Russian invasion of Galicia ultimately, as we have seen, resolved itself into a converging movement from north and east. But though it made up time in the end, the advance from the north distinctly lagged behind at the beginning and did not start going until the eastern advance, after meeting with a determined resistance before Lemberg, was to be again held up for more than a week west of that place. Perhaps Ivanoff's delayed intervention may be placed to the credit of the Austrian offensive on Lublin. Whether this was the case or not, from the Austrian point of view the question arises whether a demonstration northwards in lesser strength would not have been the better course, thus allowing the concentration of a considerably greater force to meet the Russian advance in East Galicia and permitting, possibly, of the staying of that advance and the holding of all Galicia on its frontiers. This, however, is conjecture only. The fact which the Austrians had to face as the result of the actual operations was the loss of territory and a province three times the size of Belgium, a province which was to be wholly occupied by the enemy for seven months and was not to be won back

entirely before three more months had passed.

Operations which had been taking place in a theatre 200 miles away in the north, and which belong to this first stage of the war on the Eastern Front have now to be considered.

(b) *The Russian invasion of East Prussia.*

There was but little doubt as to the intentions and plans of the Russians in this area of operations, and the invasion of East Prussia on two lines of advance was soon indicated, our allies forming their forces into two main bodies.

(a) The Niemen Army (Rennenkampf), 5 corps and
See Sketch B. 5 cavalry divisions, 250,000, between Kovno and Vilna.

(b) The Narew Army (Samsonoff), 5 corps and 3 cavalry divisions, 225,000, between Osowiec and Warsaw behind the Bobr and Niemen rivers.

To oppose this half a million of men the Germans had at first only four corps in all—some 160,000 men, three corps about Insterburg, and one about Allenstein.

Exactly a week after the Austrian 1st and 3rd Armies crossed the Galician frontier 200 miles away in their offensive

Operation of the Niemen Army. movement against Lublin, the enemy's frontier in the north was crossed by the Russians. Kovno—Insterburg was the main line of advance of the Niemen Army on the general front,

17th August, 914. Pilkallen—Stalluponen—Goldap, on which line the first engagement occurred, the Germans being finally driven back on Gumbinnen. The German opposition was by no means weak, there was heavy fighting all along the line,

24th August. and it was a week before the Russians reached Insterburg and the Germans fell back behind the Alle, and on Konigsberg, leaving the north-eastern corner of East Prussia in the hands of the Russians from Tilsit, Labiau to Allenburg and Nordenburg. With this occupation of the enemy's territory Rennenkampf's offensive came to a stand still. The reason is not known, but it was certainly not due to any action on the part of the enemy.

Moving forward on the same date as Rennenkampf,

Operations of the Narew Army. Samsonoff's Narew Army advanced on two lines—in the north from Osowiec on Lyck, and in the south from Warsaw on Soldan, on a front of 90 miles. From Lyck his right wing advanced in two columns, one north of lake Spirding on Frankenau, the other south of that lake *via* Johanusburg on Ortelsburg. His right wing

23rd August 1914. was the first to meet any serious opposition on the 23rd August, at Frankenau where

it defeated the main German force, driving it back next day on Allenstein and Osterode. The left wing meanwhile moving northwards from Soldau, pushed back the weak enemy forces which attempted to bar its way at Niedenburg, and on

26th August. the 26th August the two wings formed a junction at Allenstein, the line Soldan—

Allenstein—Rothfries forming Samsonoff's front. The cavalry of the two Russian Armies were in touch between Rothfries and Nordeuburg, but the two armies never formed an actual junction, a distance of more than 30 miles separating their inner flanks.

In less than four weeks from the declaration of war half of the province of East Prussia from Tilsit to Soldan was in Russian hands, and it seemed that the fortified line of the German Vistula from Dauzig to Thorn was the only impediment to their further advance. But the situation was soon to alter, the man who was to change it being a commander whose name will live in the future military histories of every nation—General Von Hindenburg. Collecting together at Marienburg every man on whom he could lay hands, his force, all told, did not exceed four corps or 160,000 men, a force little more than half the strength of each of the Russian armies with whom he had to deal. The assembly of this force was only begun on the 23rd August, and on the 26th, the day that Samsonoff's wings had joined hands at Allenstein, Hindenburg struck. His plan was Napoleon's favourite one of attacking separated hostile forces separately

and in detail, and Samsonoff's army to the south was his first

Battle of Tannen-
burg 26th—30th Au-
gust 1914. objective. To the five days battle which ensued the Germans have given the title of

Tannenburg, which place formed the centre of Samsonoff's front. Directing his first attack against the latter's left at Soldau, Hindenburg seized that place on the 26th August, thus cutting off the Russians from their line of retreat to Warsaw, and driving their left back on to Niedenburg, attacking the Russian right centre next at Hohenstein, he drove their right back towards Passenheim, and working round their flank in this direction the defeat of the Narew army was on the 30th October complete, and their retreat on the 31st on the only road left to them *via* Orteburg and Johannisburg, a rout. The Russian losses in prisoners amounted to 90,000, and it has been computed that only one and a half corps of the five that originally formed the Narew army succeeded in escaping the disaster which befell this army.

Hindenburg then turned north against the Niemen army whose principal mass was on the line Friedland—Nordenburg. Nordenburg is 60 miles from Allenstein, and Insterburg is another 30 miles to the north, and Hindenburg's advance on the latter place was as vigorous as had been his operations against the Narew Army. On the 11th September, Insterburg

11th September 1914. was evacuated by the Russians. Threatened in front and on his left from Angerburg and Goldap, Rennenkampf continued

his rapid retreat and on the 15th September recrossed the frontier with the enemy in close pursuit. His army had evaded the disaster which had overtaken Samsonoff, but his losses (100 guns, and prisoners to the strength of nearly an army corps), were by no means light. The retreat was continued

15th September 1914. to and across the Niemen where a halt was called, and the Russians set about to re-organize their defeated forces behind that river and the Bobr, from Olita to Osowiec.

On this date, it will be remembered, the Russian investment of Przemysl in the southern theatre had been completed and the Russians were on the Wisloka river, but on the frontier of East Prussia the operations of the next ten days remain to be considered before closing the summary of the first phase of the war. Following the retreating Russians to the Niemen and Bobr with their main forces directed on Grodno through Augustowo, and on Osowiec through Lyck,

26th September. the Germans on the 25th and 26th September attempted the crossing of the Niemen by pontoon bridges thrown north of

Grodno near Drusskeniki, while Osowiec was heavily bombarded. Their forces were however quite insufficient for the operation of forcing a defended and strongly fortified river line, and the attempt was not only easily repulsed, but their defeat was followed by a hasty retreat on Augustowo, where

**Battle of Augustowo
1st October 1914.**

on the 1st October the Russians won a victory rightly claimed by them as such:— the whole German line from Mavampor, on the Kovno road to Osowiec falling back to a line closely following that of the frontier from Wirballen to Grajewo.

3rd October 1914.

Here for the next month the conditions on this front assumed those soon to be noted in France—the “episodical” siege warfare of entrenched lines.

Points for enquiry and elucidation which the military student will have noted are, as regards the conduct of the campaign in East Prussia by the Russians, first, the great dissemination of their forces, which when Hindenburg's stroke came, found themselves dispersed over a front of 150 miles from Tilsit to Soldan; secondly, the failure of the two Russian armies to form any real junction; the reason however if a junction had been contemplated, may have been the rapidity of Hindenburg's stroke; thirdly, the lack of co-operation on the part of the Niemen army when the Narew army was being attacked, and Rennenkampf had the oppor-

tunity of rivalling Blucher's intervention on the field of Waterloo. How the subsequent conduct of the war might have been affected, had the Russians consolidated their entire successes by even holding the line reached by them and retaining half of this northern "bastion", is a matter for conjecture only. As regards the conduct of their operations by the Germans, it is perhaps sufficient to say that both the inception and the execution of his plan by Hindenburg worthily takes a place alongside of the master strokes of the great Napoleon himself.

A rapid glance may be cast at the war on the Western Front and the situation in that theatre—only the leading incidents being considered. On the 22nd August when, in the south, Austrian forces were advancing on Lublin and Russian troops crossing the eastern frontier of Galicia, and in the north the Russians were well over the East Prussian frontier, the Germans in Belgium after capturing Liege and entering Brussels were attacking the Anglo-French armies from Mons to Namur. Four days later (26th August), when in Galicia the Russians were advancing to the battle of Lemberg, and Hindenburg in East Prussia had begun the battle of Tannenberg, the French and English were retreating rapidly from the Belgian frontier and the British army was hard pressed at Le Catean. Ten days later (6th September), when the Russians were attacking at Grodek in Galicia, and Hindenburg in East Prussia after defeating Samsonoff was moving against Rennenkampf, the Germans in France after approaching Paris, had turned to the south to attack the Anglo-French forces on the Marne. Little more than a fortnight later (23rd September), we see Przemysl in the south invested, and in the north the Russians back behind the Niemen; and the close of the first phase on the Eastern Front with our Russian allies, at the beginning of October, in possession of nearly the whole of Galicia in the south, and on the frontier of East Prussia in the north, is coincident with the close of the first phase of the War

in the west where the Germans having been driven back to the Aisne, the battle line is being extended north-wards, the race for the sea has begun and the British Army is being transferred from the Aisne to Flanders.

II

The first German invasion of Poland.

The blank spaces will have been noticed between the lines indicating the fronts of the Russian armies on the borders of East Prussia in the north, and in Western Galicia in the south, in the map showing those positions at the end of the first phase or stage of the war on the Eastern Front. Some time will elapse—two months, and not until the end of the third phase is reached—before this space begins to be filled in with a line across Poland connecting the northern and southern theatres, but in the meantime there will be considerable movement in this intervening space of 150 miles between the upper and lower courses of the Vistula.

So far, in the first two months of war, the only forces mobilized by Russia, of which there has been any mention, were those totaling perhaps a million and a half of men, whose operations we have been following in Galicia and East Prussia. No movements or concentrations of troops had been discernible in Poland, and to clear up the situation was one of the objects, announced later by the Germans, of their first invasion of this country, their other avowed aim being the removal of the pressure on Cracow which was threatened by the Russian forces in Western Galicia. The assembly of the Austro-German Armies, destined to carry out the first invasion of Poland had evidently been begun early, probably about the middle of September for some of them had advanced into Poland by the 1st October,

1st October 1914. the Russian officially announcing the presence of large bodies on this date at Kielce and Pietrokow. Until now the only German troops engaged had been those in East Prussia, and a couple of

divisions lent to the Austrians in Galicia. For the ensuing operation it has been computed that Hindenburg got together some 750,000 men, nearly all second line troops, for at the outbreak of war only five active corps had been left on the whole Posen and East Prussian frontiers. Over a million and a quarter of men was the total of Austro-German troops assembled from Cracow to Thorn, to oppose whom the Russians had in the whole of Poland, probably not more than four corps and six cavalry divisions. The rapidity of the enemy's advance which, starting on the 28th September had by the middle of October reached the line of the Vistula from Warsaw to Ivangorod, is therefore not surprising—it was practically unopposed.

The organization of the operations under Hindenburg's direction may for convenience be classified as:—

- (a) A Northern Army (500,000), which based on Thorn and Kalisch had Warsaw as
See Sketch D. its objective—wholly German troops.
- (b) A Central army (500,000) which assembling between Czestochow and Cracow, moved via Kielce on Ivangorod—partly German and partly Austrian.
- (c) A Southern Army (300,000) before Cracow whose task was to drive back the Russian forces on the Wisloka river—chiefly Austrian troops.

As regards the strengths of the Northern and Central Armies totaling a million men, a very large proportion according to the German account, was retained in reserve and took no part in this first invasion of Poland and advance towards the middle Vistula. This "invasion" was indeed stated by the enemy to be merely a "reconnaissance" combined with the thrusting back of the Russian front in Western Galicia, and they claim to have sent only five corps (250,000 men) actually against Warsaw, and but seven corps (350,000) against Ivangorod.

On the 8th October, the Northern Army was on the line Lowicz—Lodz—Pietrokow; and its **Operations of the Northern German Army** left pushing forward towards Warsaw, was on the 11th October on the Bzura and Rawka rivers at Sochaczew and Skierwiwice, where the first opposition was met with, 20 to 30 miles from Warsaw. The Russian opposition was either very strenuous or the German attack not very vigorous in spite of their superiority in strength of five against the two Russian corps, for it took them

17th October 1914. nearly a week to advance the remaining few miles, until the advance was finally

checked under the guns of Warsaw and within seven miles of that town, at the moment that it seemed in their hands. Russian reinforcements (unofficially reported as amounting to a million troops) were being hurried up by road and rail, and on the 20th October the Ger-

20th October. man Northern Army found itself over-powered in its turn and forced to retreat. There was heavy fighting next day at Blonie and Sochaczew and again on the 22nd on the line Lowicz—Skierwiwice—Rawa; on the 27th October Lodz was in the hands of the Russians, after which date the retreat of the two wings from Lowicz to Thorn and from Lodz to Kalisch was not seriously molested, the thoroughness with which they destroyed the roads and railways checking effective pursuit. In the first week of November the Northern Army was back across the frontier of Posen with large bodies of Russian Cavalry following it up as far as Niezawa and Kolo (places interesting to note as forming the extreme points reached by the Russians on this frontier), while a small body succeeded in setting foot on German territory at Pleschen north of Kalisch.

The advance of the Central Army from the neighbourhood of Cracow had begun on the 28th September and was as unopposed as that of the Northern Army, with its left and centre moving through Kielce and Radom on Ivangorod, and its right

along the left bank of the Vistula on Sandomir. The Vistula between these two places was reached on the 16th October,

the date on which the Northern Army
16th October 1914.

as we have seen, was before Warsaw. An unsuccessful attempt to cross the Vistula at Josefow was made, but it was near Ivangorod at Kozienice that a crossing was attempted in strength. Here to the north and

Kozienice 16th–23rd October.

west of Ivangorod the fighting was furious for a whole week, but the arrival of strong reinforcements at this point of the front also permitted the Russians to assume the offensive, and on the 24th October the left wing of the Austro-German Central Army was forced back to Radom and beyond towards Kielce. On this road however and between it and the Vistula the Russian further advance was delayed for ten days by the effective manner in which the enemy had destroyed every road in its retire-

Kielce 3rd and 4th November 1914.

ment, and it was not until the 3rd November that the line Kielce—Sandomir was reached where the enemy had halted to make a stand. The stand was however, of brief duration for on the next day the Central Army was decisively defeated, and the first week of November saw it also back on its frontiers, and behind the entrenched line Czestochewa—Olkusz, in front of which the Russian advance was brought to a halt.

The advance and operations of the Central German Army

The operations of the Southern German Army

had however succeeded in attaining one of the objects aimed at by Hindenberg. Their right, across the Vistula threatened by this advance, while the reorganized and reinforced Austrians at Tarnow advanced against their front on the Wisloka, the Russian forces in

10th October.

Western Galicia fell back in the first week of October slowly to the San which was reached on the 10th, a movement which had the effect of partially raising the siege of Przemysl and of permitting the reinforcement of its garrison. From the middle of October to the end of the month the Austrians made determined attempts

to cross the San. South of Przemysl they succeeded in forcing the Russians back from Sanok to Sambor, but on the north their efforts were wholly unsuccessful, and assuming the offensive in their turn the Russians on the

4th November.

4th November crossed the river, driving the enemy back again westward. The Southern German Army can however place to its credit side a re-adjustment of the Russian line in Western Galicia, and the throwing back of this line from the Wisloka to the west bank of the San from Sandomir to Sanok.

Before this phase closes, a certain activity on the part of the Russians on the frontier of East Prussia **East Prussia.** has to be noted. Here it will be remembered, the end of the first phase saw the opposing forces facing each other strongly entrenched. Throughout October the conditions prevailing on this front of 60 to 70 miles were those of local attacks and counter attacks of trench warfare at various points, but in the beginning of November the offensive on the side of the Russians was pronounced all along the front, and by the middle of November the German line was "re-adjusted" back over the frontier to the line Stalluponen—Goldap—Lyck.

If judged by the test of retention of territory the first invasion of Poland must be ruled to have failed. If however, the object of the operations was a reconnaissance combined with a removal of the threat to Cracow in Western Galicia, the Germans may claim to have attained it. On the other hand, one of the results of the operation was probably the hurrying on of the mobilization of more of their forces by the Russians; and a renewed threat against Cracow this time north of the Vistula as the result of the advance of the Russian forces which had followed up the retreating Central German Army to Czestochowa and Olkusk, an advance which also now menaced Silesia.

The map showing the fronts at the close of the second phase can now be filled in. On the north the Russian line

has been advanced slightly and is in the enemy's territory. In the south in Galicia it has however, been forced back from thirty to forty miles to the San. But north of the Vistula a new line appears stretching from Cracow to Czestochowa. In central and northern Poland the presence of Russian forces at Lodz and Kutno can be indicated, but only by blocks, whilst north of the Vistula and on the southern frontier of East Prussia the space has still to be left blank for there has been no indication as yet of any troops, Russian or the enemy's, in that region.

The principal incidents and events in the theatre of war in France and Belgium to be noted during October up to the middle of November, are the fall of Antwerp (9th October); the end of the race for the sea and of the attempts of the Allies and Germans each to outflank the other; the arrival of the British Army in Flanders from the Aisne to fill the gap from Lille to the Yser; the hard fighting from Lille to the sea culminating in the completion of the allied battle line from Nieuport to the Vosges.

III

The Second German invasion of Poland.

Although the Russian advance in East Prussia had received a serious set back in the first month

November 1914. of the war and no great progress could be claimed for it even by the end of the third month, in the central and southern theatres the situation was distinctly favourable to our allies. Poland had been cleared of the enemy, and the invasion of that country which had reached the Vistula itself, thrown back to the enemy's own frontiers and the main Austro-German force followed up to the fortifications of Cracow; whilst in Galicia an Austrian offensive had been checked and the advance towards Cracow was being resumed. The masking of that fortress and then the invasion of Germany through Silesia appeared to be only a matter of time. But the retreating Germans and Austrians had scarcely reached their borders before a new

offensive movement was planned and set on foot by Hindenburg, having as its object the removal of the threat against Silesia not by a direct advance against the Russian forces in South Poland, but by bringing pressure to bear in another direction, namely in central Poland.

The force collected at Thorn and Wreschen for the purpose was estimated at 12 Army Corps (500,000 men) and was placed under the command of General Von Mackensen. A Second Army was also assembled at Kalisch to co-operate with Mackensen. In East Prussia and Galicia the German and Austrian forces were to remain on the defensive.

Advancing from Thorn and Wreschen on a front of 50 miles, on the line Wlocawek—Kolo with his left on the Vistula and his right on the Warta river, with the Thorn—Lowicz railway as his line of supply, Mackensen rapidly drove back the Russian advanced troops in this region defeating a large body of them at Kutno

Kutno, 15th Nov., 1914. on the 15th November. On the 16th his left had reached Plock and his right Dubie,

the Russians retiring on the Bzura river where it was hoped the enemy's advance might be stopped; but the passages at Piotek and Leczyka being forced two days later, the Russian left wing and centre fell back covering the Lask—Lodz—Lowicz railway, their right retiring on Gombin on the west bank of the lower Vistula. There was heavy fighting all along this line, but it was against the centre that the main efforts of the Germans was made, where on the 23rd

23rd November. November the Russian front was pierced between Strykow and Zgierz by two German Corps which succeeded in penetrating as far as Brezin.

This incident formed one of the dramatic events of the war, but interest was centred not so much on the piercing of the Russian line, as on the fate of the two German Corps, for reinforcements had arrived, the gap was closed and the fate of these two Corps appeared to be sealed. The gap had, however, been insufficiently stopped, and after the most stren-

ious fighting the two corps succeeded in retracing their steps with the loss of nearly half their numbers and all their guns. For the next week Mackensen was effectually held along the whole line from the Vistula at Gombin to Sobota on the Bzura and from there to Lodz ; but on the 1st December the advance of the Kalisch Army from Sieradz on Lask against the Russian left began to take effect, and the Russian offensive of which there had been indications was checked. There was another week of heavy fighting, but on the 6th December

8th Dec., 1914.

the Russians evacuated Lodz, their centre falling back from Sobota to

Lewicz and their right from Gombin to Ilovo on the Vistula. This line was to fall back a little nearer Warsaw and more heavy fighting was to follow in the end of December on what was to be known as the Bzura—Rawka front, but the occupation of Lodz by the Germans in the beginning of the month conveniently closes the operations connected with the second invasion of Poland.

In connection with this invasion is to be noted what may be termed an incursion by the enemy into Northern Poland north of the Vistula in the first week of December. Although constituting apparently a threatening movement against the Russian right at Ilovo and an advance on Warsaw from the north, the movement in effect was only a reconnaissance. Advancing along the railway from Soldan through Mlawa, a small German force reached Prasnysz and Ciechanow but was quickly thrown back on Mlawa.

The end of the second phase of the war had seen the Russians in Galicia resuming the offensive in the first week of November and recrossing the San. Events in central Poland and the enemy's second advance on Warsaw overshadowed the Russian operations in the south and the severe fighting in that theatre before the Russians succeeded in recovering the ground lost in their retirement to the San in October. By the end of

Galicia.

November however, they had not only retraced their steps to the Wisloka river, the limit of their first advance in

September, but crossing the Dunajec, had reached Bochnia and the line of the Raba river with their advanced guard at Wieliczka and within fifteen miles of Cracow. Concurrently with this westward advance is to be noted also the seizure by the Russians of the principal passes in the Western Carpathians, the Dukla and Uzsok on the 18th November and the Lupkow pass

on the 25th November, the occupation of which secured the left flank of their army in

western Galicia and its three lines of communications, the main railway line from Cracow to Brody through Jaroslav and Lemberg, the line from Neu Sandec through Sanok, Sambor and Brezany to Tarnopol, and the southern line from Sambor through Stryj and Stanislaw to Husiatyn, the eastern extremities

of these two lines being covered by a

The Bukowina.

Russian advance on the 1st December to Czernowitz in the Bukowina in the south-eastern corner of Galicia, another area of operations to be added to the vast Eastern Front which has now attained a total length of 850 miles.

Beginning at its south-eastern extremity on the northern border of the Bukowina, this front now extends from Czernowitz westward along the northern foothills of the Carpathians, along the crest of this range at the Uzsok, Lupkow and Dukla passes and thence from Neu Sandec northwards east and north of Cracow to Novo Radomsk. In Western Galicia the progress of the Russian arms is very noticeable, the re-investment of Przemysl, and an advance of seventy to eighty miles from the banks of the San to the line of the Raba river 20 miles from Cracow. Immediately north of the upper Vistula there has, however, been a slight bending back of the Czestochowa—Olkutsz line especially on its right flank from Czestochowa to Novo Radomsk. From the latter place the line runs through Pietrokow and Lowicz to Ilovo on the

lower Vistula. In northern Poland the Russian repulse of the German incursion in that region has advanced the line to Mlawa on the southern border of East Prussia, but on the eastern front of that province there has been no change.

At the beginning of this third period of the war, hopes had undoubtedly been high regarding a further progress of the Russian Armies. Cracow seemed again to be on the point of being invested, Silesia was seriously menaced, Poland had been cleared of the enemy and the way appeared open for an advance in force right up to the frontiers of Posen and the securing of the right flank by a simultaneous advance through East Prussia. But the set back before Lodz materially altered the situation. Instead of finding them in a position to move forward in central Poland we found the Russians at the beginning of December staving off a renewed German advance on Warsaw, and if Mackensen's operations in November are adjudged a failure, in that he did not succeed in again reaching Warsaw and the middle Vistula he can, on the other hand, claim the frustration of Russian hopes of an invasion of German territory.

On the western front the only incident to chronicle in November, was the end of the first battle of Ypres in the middle of the month, the closing of the battle line from the North Sea to the Vosges, and the commencement of what was to become a long drawn out trench warfare on this front with its purely local attacks and counter-attacks, and small gains and losses of ground.

IV.

Minor Events.

We now reach a phase in the war on the Eastern Front which when compared with the three preceding periods, might be termed a lull. But the term would require considerable qualification. In the succeeding months of December and January there were to be no operations of the scope and magnitude of the invasions and counter-invasions, the advances and retreats, and occup-

ation and abandonment of territory of the first four months of the war; but gains and losses of ground will still have to be noted on either side as the result of operations which though of minor extent were by no means of minor importance. Austrian and German offensive movements in the western Carpathians and before Warsaw in December, and Russian counter offensives in the Bukowina and northern Poland in January will lead to marked changes in the battle lines of the Eastern Front.

The end of November and of the third phase saw the

**The Austrian advance
in the Western Car-
pathians 12th–23rd
December 1914.**

Russian front in Western Galicia running from Neu Sandec at the foot of the Carpathians in the south up to the Vistula and Galician border north east of Cracow,

whilst in the Carpathians the Dukla, Lupkow and Uzsok Passes were in Russian hands and the plains of Hungary menaced in this direction. The Austrian offensive in the middle of December had as object the removal of this menace and possibly the relief of Przemysl. In October the enemy's offensive, it will be remembered, had been a direct thrust eastward towards Przemysl but the present movement assumed the shape of a double advance against the Russian front from Cracow, combined with an attack against their left flank which rested in the above mentioned passes, the flank attack being carried out by a new Austro-German army of the estimated strength of four corps or some 160,000 men which had concentrated south of the Western Carpathians.

The strength of the Russian army at this time in Western Galicia is not known, but it must have been inferior in numbers to those now brought against it, for the Russians at once fell back under the combined threat towards the Dunajec river, their centre and left retiring still further back to the Biala a tributary of the Dunajee, Neu Sandec being evacuated on the 12th December. Two days later the Dukla and the Lupkow passes were abandoned and positions taken up in the foothills of the Carpathians, their right linking up

south of Gorlice, with those on the Biala. On the 23rd December the enemy's advance appears to have spent itself, the Dukla being abandoned on the 27th December, and on the 4th of January the Uzsok Pass, but the result of these operations cannot be regarded as insignificant. Although Przemysl (whose garrison had endeavoured to co-operate by making some half a dozen sorties in these ten days), was no nearer being relieved, the threatened Russian descent into the Hungarian plains had been stopped by their loss of the passes and the pressure against Cracow considerably lessened by the Russian retirement to Tarnow and the Dunajec—Biala line. This retirement, moreover, had resulted in the withdrawal of the Russian front north of the upper Vistula from Novo Radomsk to Olkusz back to the Pilica and Nida rivers, a further relief of the pressure against Cracow.

The Russian front thirty miles west of Warsaw which

The Bzura-Rawka front, 15th—26th December 1914. after the withdrawal from Lodz in the beginning of December ran from Novo on the Vistula, west of the Bzura and its tributary the Rawka, through Lowicz and Skierniwice, does not appear to have remained very long on that line, for within a week after the evacuation of Lodz on the 6th December we hear of heavy fighting at various points actually on these two rivers and of the German attempts to cross them. Sochaczew and Debsko on the Bzura; Bolimow and Rawa on the Rawka, with two tributary streams named the Bialka and Rylka which flow into the Rawka near Rawa, are names that figured in the *communiques* reporting the operations on this front of nearly 50 miles, where opposite Bolimow the enemy succeeded in effecting the crossing of the Rawka and establishing his lines two miles beyond the river. The fighting during the whole of its duration of ten days was very heavy, but it is doubtful if Hindenberg's activity really meant a resumption of his advance on Warsaw or more than the consolidation of his front. He not only secured this, but his vigorous offensive had the further

effect of hastening the retirement of the Russian forces to the south about Pietrkow, who had been obliged to fall back before a hostile advance in that direction, and who now further found their right flank uncovered by the retirement on the Bzura-Rawka front.

The withdrawal of the Russian front between the lower and upper courses of the Vistula was undoubtedly a set back to the cause of our Allies and a serious one, for it brought to an end their offensive in Poland, reducing their operations henceforward on this front to a pure defensive. On the other hand, the retirement resulted in the straightening and strengthening of their line which was, on this front, to remain unbroken and immovable until four months later it was turned in the south by the enemy's great offensive in Western Galicia, when even that part of it which immediately covered Warsaw was to stand firm for another three months.

The direction and course of this line may desirably be noted. Starting in the north at the junction of the Bzura with the Vistula near Wyszogrod, it runs for 30 miles along the right or eastern bank of that river, as far as its junction with the Rawka 5 miles east of Lowicz. Thence it follows the line of the Rawka, for a great part 2 to 3 miles from it on its eastern bank, for 30 miles south to Rawa. Between Rawa and Kielce it rests on no natural obstacle until after crossing the Pilica east of Tomaszow it meets the Nida west of Kielce, running from there along the right (western) bank of that river down to its junction with the Vistula.

The first three weeks of January 1915 are marked by a cessation of any real offensive movement on the part of the enemy, for the fighting along the Rawka just south of Sockaczew, at Sucha and Borzymow, and at various points along the Nida further south, was only of the nature of small and very local attacks of villages and points along the Russian defensive line, on the other hand the sixth month of the war marks certain activities on the side of our Allies which not only resulted in their gaining a certain

amount of ground, but are noteworthy as being their last assumption of the offensive excepting only an advance to be made by them in the end of March in the Western Carpathians.

The Russian advance
in Bukowina, 1st-23rd
January 1915.

When invading Galicia in the first month of the war, for the protection of their left flank and their communications, a force had been detached by the Russians southward to the Dniester in the neighbourhood of Zaleszczyki in the Bukowina; and their occupation of Czernowitz, the capital of the district on the 1st December has already been noted. This force now proceeded to advance to the extreme southern borders of the province. Radautz was occupied on the 31st December 1914, and two days later Suczawa and Gura Humora. Here the Russian force turned westward reaching Kimpolung on the 6th January. Its advance had by no means been unopposed—there had been continual fighting the whole week—and west of Kimpolung the opposition appears to have increased for the Kirlibaba Pass was not reached and captured until the 16th January. There was more fighting round and about the pass to the south during the next week, but the pass marks the extreme limit of the Russian advance in this distant south-eastern corner of Galicia—a region which was to be immediately abandoned by them when the enemy's great offensive against Galicia across the Carpathians began on the 23rd January.

The advance into the Bukowina is generally regarded as being due to political considerations only—to the influencing of Rumania favourably in the cause of Russia; and its distance from the main area of operations in the southern theatre has been urged as depriving the advance of any military value. The remoteness of a flank in the stupendous fronts of these days does not, however, imply inability to influence, directly or indirectly, the course of an operation, as the enemy was to show the world a few months later, when in May, concurrently with his great thrust in Western Galicia he launched in the extreme north of the Baltic Provinces a movement

which was subsequently to form a very important feature in his great advance eastward from the sea to the Carpathians. But the direction of a blow and its objective and object are of more importance than the distance from which it is delivered, and as regards a general Russian offensive the Bukowina probably was of no great importance. It was, however, another matter as regards defensive operations and had the district been occupied by Russia in strength, its position on the flank of any hostile advance into south-eastern Galicia *via* the Jablonica Pass would have constituted a serious menace. This advance was very soon to be made by the Austrians, but the Russian forces in the Bukowina were insufficient for the purpose.

There is one sector of the long Eastern Front of nearly 900 miles which has seen but little of the strenuous six months war. It is that part of it which lies between the southern frontier of East Prussia and the lower Vistula between Thorn and Warsaw and the Naiew and Bobr rivers between Warsaw and Osowiec (see map 2 East Prussia).

**The Russian advance
in North Poland
and East Prussia 12th
—24th January 1915.**

Its immunity cannot be ascribed to absence of railway communication, which is notable, nor to other physical causes, for in six months, time the Warsaw—Lomza sector is to be scene of the enemy's determined and successful advance upon Warsaw; and its freedom till now from a serious clash of arms was probably due to a lack of sufficient numbers on both sides. In the beginning of December it will be remembered, the enemy had made an incursion from Soldan which got as far as Prasnysz and Ciechanow, but had been quickly thrown back to the frontier and Russian troops had followed it up as far as Mlawa. It was on either side of this line that the Russians now showed a certain amount of activity, advancing on the one side up to the frontier at Chorzele and Myszyniec, and on the other to Plock, Sicripec and Radzanow, and even still farther to Dobrzyn, and to and across the Skrwa river. The posi-

tion of the left of the Russian line beyond Plock 40 miles in advance of the right flank of their forces on the Bzura front at Wyszogrod was a curious one, threatening as it did from Plock the rear of the enemy forces south of the Vistula, but the Germans do not appear to have been perturbed in any way by this advance, and they had no doubt taken suitable measures south of the river for the protection of their communications with the Bzura front and of the Thorn—Lowicz railway.

For two months, since the Russians had advanced their line on the eastern borders of East Prussia to the Lyck—Goldap—Stalluponen front in the first half of November, this

East Prussia. line had been absolutely stationary. Lack of sufficient troops on both sides is again the inference. It is known that this front had sent assistance to Warsaw on the occasion of the first German invasion of Poland in October and probably also in November when the Russian line was pierced north of Lodz in the beginning of December. It will shortly be seen that there were only four Russian corps on this front, and the enemy's strength at this time could not have been more than half this number, for scarcely any opposition was now made to the Russian advance in the latter half of January to Johannisburg in the south, to Lotzen in the centre and thence along the Angerap river, whilst further north is to be noted an advance across the northern frontier of East Prussia directed against Tilsit, and extending from Pogegen a few miles north of that place to Pilkallen.

In some quarters, this activity of our allies in January on the extreme flanks of their front, in the south in the Bukowina and in the north in East Prussia, was regarded as being the preliminaries of a general Russian advance and assumption of the offensive. The situation was, however, to be very materially altered on both these flanks and in a very short space of time.

On the immobile Western Front the chief episodes to

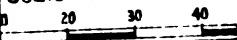
be recorded in December and January are small gains and losses of ground, to be measured only in yards, at Vermelles and Festubert in the La Bassee sector; at Soissons at the point of the elbow of the line; at Sillery and Perthes in the Champagne district, and at Steinbach in the Vosges at the southern end of the long line near Mulhouse. Of these episodes the six days fighting at Soissons, where the French at first gained ground to be driven back again across the Aisne, is the most important, but everywhere the operations are insignificant, the troops taking part in them rarely exceeding the strength of a division. In December the enemy report as having taken from a French prisoner a copy of an order of General Joffre announcing the imminence of a general offensive by the French, but the French official retrospect of the first six months of the war contains no indication of any such purpose. On the contrary, it is at pains to explain the reason of the inactivity of the allies in the West since the close of the battle of Flanders or first battle of Ypres, and the absence of important offensive operations, by stating that the main object of the French Command has been to hold, by local attacks, as large a number of the enemy as possible in order to prevent the withdrawal of troops from the West to the East. In regard to such withdrawals it is interesting to note the official statement that of the 52 Army Corps facing the Allies in the West, Germany has been able to send $4\frac{1}{2}$ corps to the Eastern Front.

(*To be continued in the April Journal.*)

GALICIA

BASES I, II and III

Scale of Miles



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(To be continued in the April Journal.)

PRUSSIA

PHASE I.

Scale of Miles
20 30 40 50



OSTROLENKA



oldau
Mlawa
F

Siechanow

G
zogrod
Blonie
Sochaczew
now
erniew

awa

zow

Goldau

Milawa

Przasnysz

Ciechanow

NOVO
GEORGIEVSK

zogrod

Blonie

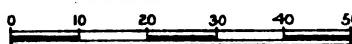
Sochaczew

now

erniewice

WARSAW

Scale of Miles



Kozienice

IVANGOROD

Radom

Lublin

Kielce

Josefow

Sandomir

Stopnica

R. Rustula

R. Wisla

R. Wisla

Jaroslav

chnia

Tarnow

unajec R.

Biala

Gorlice

R. San

Neu-San

Dukla P.

Sanok

PRZEMYSŁ

Sambor

Lupkow

Dukla P.

Uzok P.

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2

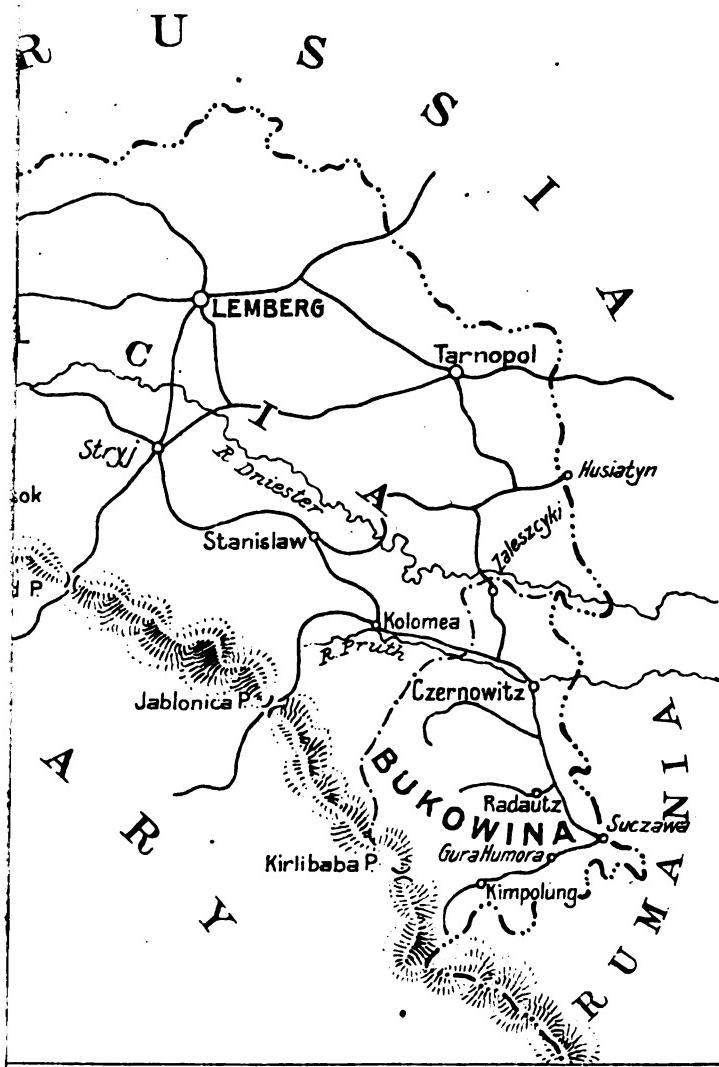
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2

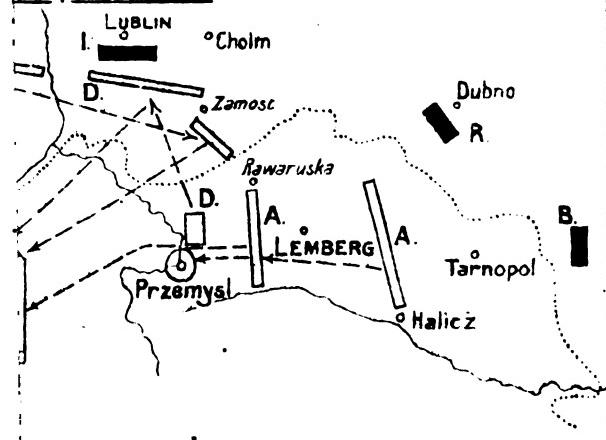
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1 P

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TCH A.
in GALICIA.
Sep. 1914



ERENCE.

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7S

CH B.
EAST PRUSSIA.
Sept. 1914

II
THE GERMAN ADVANCE AND RUSSIAN RETREAT



Kampf
off
purg

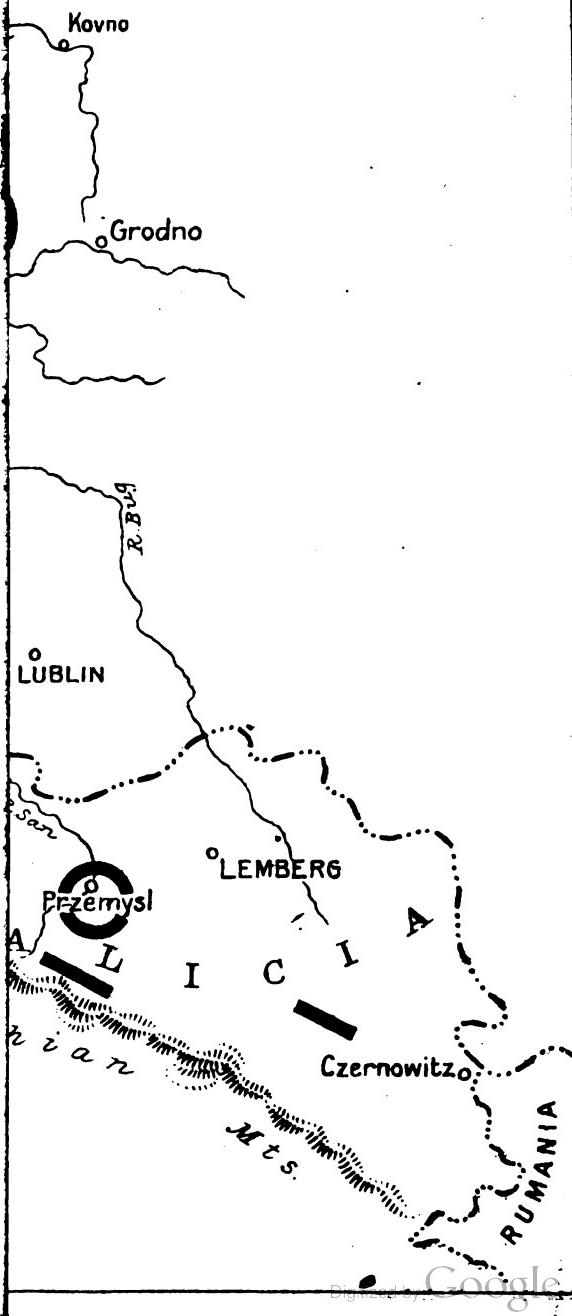
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CH C.

ASE I.

SIAN fronts,
Sept 1914



Thorn

KOVN

Grod

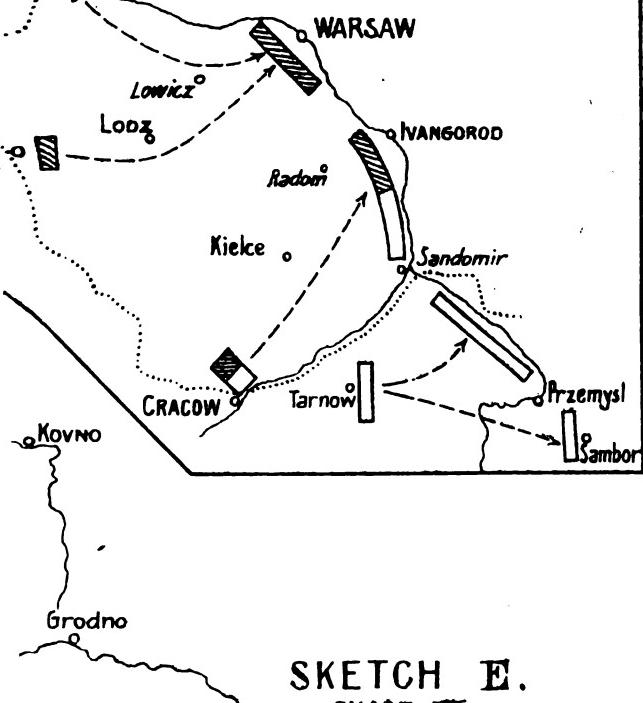
UBLIN

ysl

Thorn

SKETCH D.

The first German Invasion of Poland.



SKETCH E.

PHASE II.

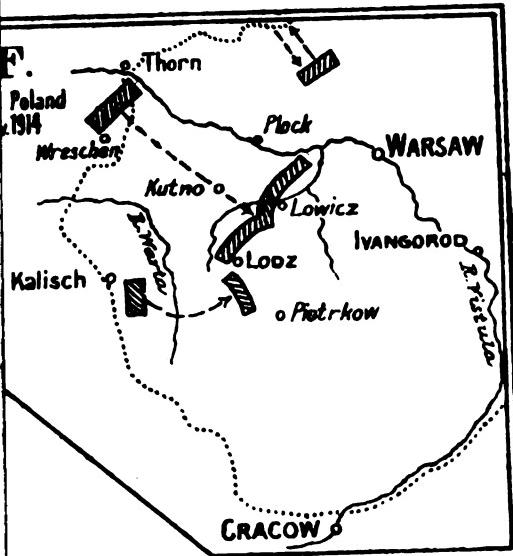
The RUSSIAN fronts,
end of Oct. 1914

LUBLIN

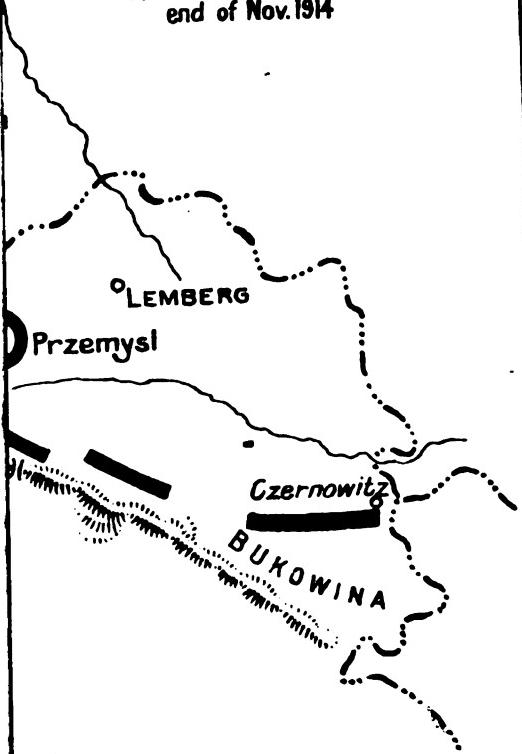
Przemysl

LEMBERG

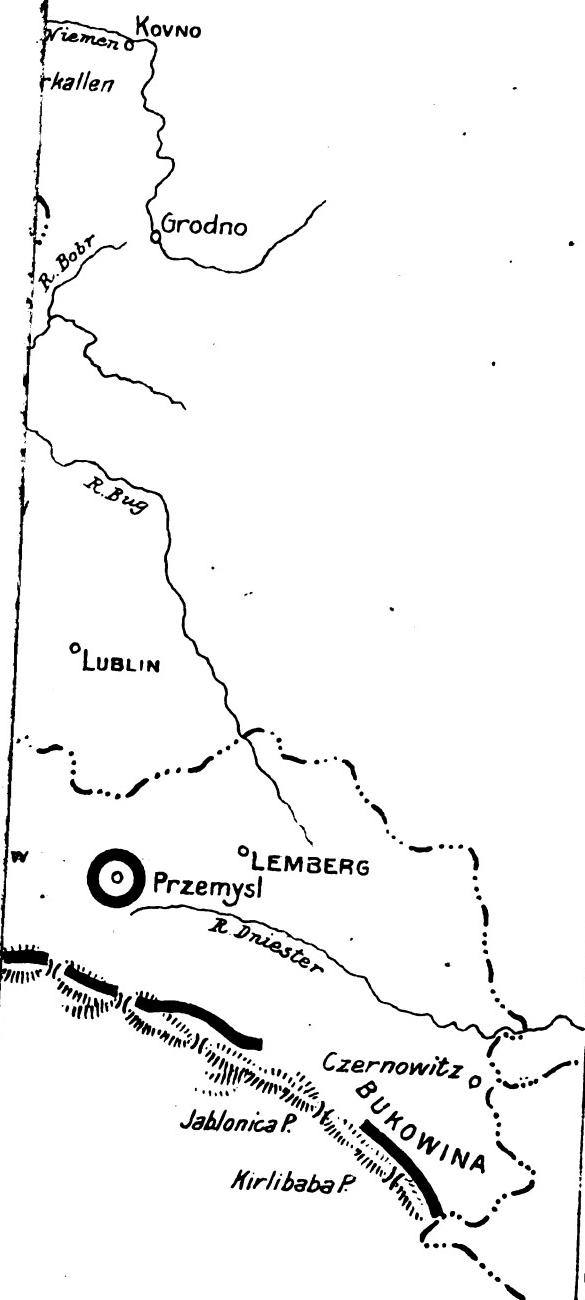
Czernowitz



SKETCH G.
PHASE III.
The RUSSIAN fronts,
end of Nov. 1914



ITCH H.
CASE IV.
RUSSIAN fronts,
of Jan. 1915



SOUTHERN ARMY ESSAY 1915.

*"Under modern conditions when a state of war exists,
how to deal with a hostile alien population in our midst."*

BY

MAJOR E. G. HART, SUPPLY & TRANSPORT CORPS.

There can be no two opinions among those acquainted with the conditions of modern warfare, as to the undesirability and danger of hostile aliens at large in our own territories in a time of war. Based on the ramifications of interdependence found in modern civilization, a writer some years ago published a book, which obtained a very wide circulation owing to the plausibility of its arguments, showing that war had become an impossibility on account of this very fact of interdependence. For the same reason the wholesale internment or deportation of a hostile alien population on the outbreak of hostilities becomes a very complex problem, the carrying out of which without a careful and detailed preparation in peace time may lead to greater injury to ourselves than to the enemy. Hence in the present war we have seen hostile aliens at large for very long after their danger had been generally recognized, because their removal or internment would have led to a disorganization of the economical situation. Whether this dislocation would have cost us more in the long run than the damage done by the information which has been sent through to the enemy by them is a matter which can only be proved after the war is over: there is little doubt but that a considerable amount of help has been afforded by these aliens at large to their mother country, or that by previous provision and preparation we could have arranged to prevent the dislocation without running the risks attendant on leaving hostile individuals at large. Incidentally, the danger to the aliens themselves from mob fury has to be considered. Injury done to unarmed people practically in the state of prisoners at large must reflect but little to the credit and honour of one's own country, and it is impossible in any war to be certain that at

some time or another the feelings of the populace will not rise to lynching point.

Let us consider the ways in which such an alien population can injure us, if at large when a state of war exists between their country and our own. The first, and probably the most frequent of methods, is that of affording information to their Government regarding our troops, their movements, equipment, munitions and as to the internal situation, etc. This they can send through our own publications in the way of newspapers, books, and pamphlets *via* neutral countries, or by means of their own writings and messages in code, invisible writing, and the various methods of concealment known to all those who have given attention to the subject. Besides this they may be able to give direct information to submarines, spies, and ostensibly neutral ships in our ports, or else by means of signals (motor car head lights, lamp signalling from roofs, etc.,) to their air craft by night. Wireless telegraphic communication can also be established by them, as is suspected to have occurred in India, Ceylon, and the Straits Settlements, and to have accounted for the success with which the Emden eluded her pursuers and captured our merchantmen.

Besides information, more solid assistance in the shape of fuel, supplies, and reinforcements of personnel may be given to submarines, supplying vessels and aircraft in lonely spots, as has been suspected in little islands off the Scotch and Irish coasts during this war.

A third means of embarrassment is the instigation and encouragement of internal dissension, such as strikes and reformatory or revolutionary movements. There seems good reason to believe that some at least of our troubles in this respect during the past year have owed their origin to un-interned aliens. Where such dissensions interfere with the production of munitions or of fuel, a very material direct assistance is afforded to the enemy, and those who sit safely at home and make, or fail to make laws, have no right thus to handicap our troops at the front as to their supply of muni-

tions. In this category we can also place the activities of missionaries and teachers in our colonies and dependencies. Although there may be no actual open sedition or disloyalty preached, yet we can hardly expect from hostile aliens the same sentiments as we would from our own countrymen. Further, the excuse that is urged with regard to priests having no nationality can hardly hold good for the future, for one nation at least, when we have the instance of the German missionary in West Africa who attempted to blow up H. M. S. *Dwarf* with a bomb, whilst in Chota Nagpur there is the case of the head of the German Lutheran Mission issuing a circular notice to his subordinates, soon after the war broke out, that they should be careful to see that the Government grant for education should be spent on nothing but education—a notice which can hardly fail to elicit the very pertinent enquiry as to what other purposes the grant used to serve?

A fourth means of assistance is by the commission of acts of violence, either individually as murders, explosions, bomb throwings, firing at trains, and incendiarism, or in organized bodies to assist in a descent of the enemy upon our own territory, when a surprise attack from the rear would be a help out of all proportion to the numbers engaged. The last is not a contingency much to be feared now in the present war, but it might have been a very serious one had we not been so fortunate as to have been so alert and ready when the war broke out, thanks to the efficiency of our naval administration. As regards the individual acts of violence, it is said that there have been far more than the normal number of fires in London during the past year, whilst there are one or two "unexplainable" accidents to warships, etc., that may, when the public mind is not so liable to panic, be given out as "enemy acts". Although the actual military value of such activity is small, the moral effect is very great and considering the influence which public opinion has upon the Government in our country, a few successful acts of this nature may

have an exceedingly adverse influence on the course of the war.

There can be no doubt, then, as to the advisability of deporting or interning all hostile aliens as well as others of whose loyalty there is the slightest doubt, and in carrying this out we will do well to accept as a guiding principle the recent dictum of Sir John Simon that strict, precise, legal proof as to disloyalty or disloyal intentions and opinions, was unnecessary in a time of war. In peace time justice to individuals is an ideal to be striven for at almost any sacrifice, but in war time, when the freedom and very existence as a nation of our people may be at stake, such things must not weigh at all against the country's safety. We have seen in the present war that naturalisation has often been deliberately adopted in order to aid in espionage, and so naturalized individuals should be treated as hostile aliens as regards internment, though, where there are really good grounds for supposing that such are really loyal the conditions of their imprisonment may be somewhat ameliorated. If they be really loyal to our own country, they will be the last to object to a measure which they can easily be made to see is for the good of their adopted country.

Internment is of course the safest course to adopt, but it is expensive both in supplies and guards. Deportation should, however, only be resorted to for those quite incapable of affording any assistance either direct or indirect to the enemy. Cases of the deportation of women who have been proved to be spies, appears to have occurred: this seems to be a mistake, and we would suggest that all female aliens of the adventuress type should be interned even more closely than any others. If deported they may easily find their way back in disguise and very much more on their guard than before. We should also avoid sending back males under or over the normal military ages, since we have seen in the present war how much the limits may be stretched. At first out here the limits were 20 to 42, whilst now they seem to be 16 to 50.

It would seem advisable therefore to fix 15 and 55 as the limits so as to provide for all possible contingencies in future.

PREPARATION IN PEACE.—On the outbreak of hostilities there is but little time to organize a sound system of dealing with such a question as we have before us now, and even if there were, the excitement caused by the war would probably have a prejudicial effect on the soundness of the scheme. Further, the personnel to deal with the matter must require a certain amount of training in administration, and so, from all points of view, it would seem very desirable to organize a department in peace time to deal with this important matter. Already there probably exist secret investigation and secret service departments which might well be amalgamated with the proposed branch, which should be kept as secret as possible. The peace personnel will be mainly a staff and a skeleton one, with, however the full war personnel nominated and sufficiently trained and acquainted with their duties on the outbreak of war as to ensure smooth working. At the head of the department should be a senior military officer who has made a mark in administration and organization and who should be directly responsible to the Secretary of State for War at home, or to the Army Department in India during peace time; but on the declaration of war should come under the War Office direct. Such an arrangement will ensure a greater freedom in measures of preparation, whilst at the critical period the administration will be under those mainly responsible for the internal security of the country. The personnel should be recruited in the higher ranks from retired military and naval officers of administrative ability and either too old or else medically unfit for field service. The war staff should, on appointment, be given a period of such training as is necessary, and thereafter be called up for short refresher periods as required.

The branches of this department might be somewhat as follows:—

- Registration and Headquarters.
- Espionage.
- Detection (peace executive branch).
- Security (war ditto).
- Internment and deportation.

By examining the duties of these branches in detail, we can see what will be the necessary work of preparation to be carried out in peace time.

REGISTRATION AND HEADQUARTERS—This branch is the administrative and collective branch of the department, and will be the first to be formed and to start work, for it is on information collected by it that the work of the other sections will depend. It will begin by registering all aliens in the country as well as all others whose loyalty is to be suspected, and in this work it should have the wholehearted co-operation of all existing machinery, in the way of **secret** service departments, as well as that of the police and all civil departments able to furnish information, *e.g.* the land revenue, income tax, and similar departments. It will index and cross index all these individuals, probably by the card index system with its recent developments in the way of shaped and coloured signals according to the degree and kind of danger to be expected from them, as well as other information regarding their places in the economic machine and their abilities and qualifications to assist the enemy, if deported back to their native land. From a well carried out system of registration as suggested above statistics regarding any point in particular should be readily available.

This branch will also undertake the registration of personnel to supplement the peace staff of the department, and will endeavour to utilize the services of those, either as volunteer workers or as paid employees, who are unfitted for other national work of greater importance. It is to be noted that detective and administrative work, such as will be largely in

demand by this department, does not call for medical fitness or physical strength but rather for brains and energy, and the employment of women in large numbers seems indicated.

ESPIONAGE.—In this section, which will be the theoretical or staff section of the department, the various methods of espionage, both modern and ancient, will be studied, means of guarding against them considered, and definite plans worked out to render ineffective all such schemes as seem likely to be employed. Ruses and the dissemination of false information through hostile aliens and others will also be gone into, and definite schemes to support such false information by actual demonstrations of armed forces, etc., as may be available, worked out. It may also, with advantage, study the psychology of spies and espionage. In all cases it should understand that its duties are undertaken with a view to put the theories and principles formulated into practice, and regular lectures, informative leaflets and pamphlets, etc., should be arranged for the benefit of the personnel, or the other branches of the department, whose experiences in their practical work should be eagerly sought and noted.

DETECTION.—This branch is an executive one for the collection of information in peace time when the methods of the security section, which will to a great extent replace it in war, would not be generally acceptable. It will be organized territorially in agreement with the civil administration of the country, and will often work hand-in-hand with the personnel of the registration section, and may even share its personnel at times when convenient. Its principal duties will be to keep in touch with all suspicious characters, to watch all others who may be working for our potential enemies against us, and to discover all plans and schemes concocted by them. A nucleus, or possibly the whole section as outlined here, may already be in existence in the Special Investigation Department. This branch is one in which it will be possible to obtain a certain amount of volunteer and honorary assistance from leisured and patriotic individuals, as well as from such

associations as the Boy Scouts and Girl Guides movements; though care and discrimination will have to be exercised here lest it lead to an undesirable publicity.

SECURITY.—Here there will be but little to do in peace time, except study and theorizing, together with the drafting of schemes etc., to put into execution on the outbreak of war and the training of its reserve personnel, which will be very large in comparison with the peace staff. It will go carefully into the question of preventing and dealing with all acts of violence, individual and concerted, of hostile aliens. It also will endeavour to obtain the co-operation of boy scouts, etc., and as it may be more open in its methods, may conveniently screen the Detection Section in this way.

INTERNMENT.—This section will consider and prepare for the speedy apprehension, and conveyance to carefully selected and prepared sites, of all hostile aliens, directly war breaks out, and it should arrange especially for the extra careful guarding of such aliens as the Detection Section will have notified as being dangerous. The whole routine of internment camps will have to be gone into in detail and provisional contracts arranged periodically for supplies, whilst the necessary reserves required must also be kept up so that there may be no hitch during the initial stage of hostilities when there will be most opportunity for hostile aliens to add to the general confusion, if they are not at once interned owing to the accommodation not being ready.

ECONOMIC.—Here information regarding the economic situation which will be created by the removal of all hostile aliens from their ordinary avocations will be carefully collated, schemes drawn up to arrange for their replacement, and all possible steps taken to minimize the disturbance consequent upon internment. A register of loyalists likely to be unemployed on the outbreak of war, both of the leisured classes and of those likely to be thrown out of employment by the war, should be made, and efforts made to give them such training as will enable them to take the place of interned aliens.

Generally, all sections will prepare in the utmost detail for the action to be taken on the outbreak of war, drawing up detailed "mobilization orders" for the several different cases probable. They will try to make the whole of their staffs realize the immense importance of the first few days as regards the department and that therefore no detail is too small to escape attention and preparation: at the same time it must be realized that exact circumstances and details can never be foreseen and so all schemes must be capable of alteration at the last moment if necessary. The heads of each branch should meet the Director and his staff in conference once a week or so and resumes of work done, proposals and suggestions made, and other matters of common interest to all should be brought forward. The Director will do his best to ensure thorough co-operation between all the branches at these conferences. Similar territorial durbars may well be held as far as they are applicable, and the occasional attendance at them of police and civil officials would add to their value.

The funds required for such a department to enable it to carry out its work satisfactorily would probably amount to something like a million a year, judging by the expenditure of a country like Germany on its secret service agents in France alone, an amount said to be £780,000 per annum, but in view of the enormous expenditure incurred in a war like the present, a great deal of which may be put down to our laxity as regards hostile aliens, it would seem a very small insurance premium to pay. How much greater damage might have been done by them is calculable when looking at the case of Russia and the destruction of her munitions factory at Otcha, which has led to her being pushed back as she has been, and to an enormous loss of life, as well as to the prolongation of the whole war. There can be no doubt but that an efficiently organized hostile aliens department, such as has been outlined here, would have rendered such an act as the above practically impossible.

The accounts will have to be kept more or less secret in

the same way as is arranged for similar secret service accounts at present: it is presumed that after the machinations of the German Government previous to this war have been made public, as they doubtless will be, the general public will realize the necessity for such a procedure and will not put obstacles in the way of a secret audit of these accounts.

ON THE OUTBREAK OF WAR.—This department must necessarily be kept in the closest touch with the political situation whenever it becomes at all strained, since it must be ready to act with the swiftest despatch on the actual outbreak or even before, as soon as war is practically certain. Even if war is not declared, apologies and compensation will usually meet the case of unlawful arrest and detention and will amply repay the security obtained in the case of dangerous aliens. The watch on all these should be doubled or trebled as soon as the horizon becomes darkened, and such watch should be maintained until they are either interned or the trouble blows over. Very careful notes should be made of their conduct at such a time and they should not be actually interfered with unless there is actual danger to life and property; even so, if steps can be taken to make matters safe after their departure from the scene of operations so as not to arouse their suspicions, it will be better, so that all their possible lines of action may become known and provided against.

Arrangements will have been made in peace, of course, for the strictest censorship of both post and telegraph offices, and specimens of all dangerous aliens' handwriting should have been obtained and issued to the experts in offices likely to be used by them to assist in stopping their messages and correspondence.

The necessary laws which cannot be passed in peace to deal with interments and the other measures rendered necessary on the declaration of hostilities must be ready and arrangements made with Government to push these through as quickly as possible: there will naturally be a permanent understanding that action in accordance with them can be taken and

that the laws should have retrospective effect to cover this. Legislation which appears to be very necessary is that regarding the seizure and utilization of private enemy property "on loan" during war time: during the present war the spectacle of enemy ships and enemy property lying idle whilst we have been urgently in need of the same, is an anomaly which should not be allowed to occur again, since the procedure is one which only benefits the enemy state with whom we may be at war, and not the enemy individuals, who might be receiving interest, to be paid after the close of the war, of course, for such use of their property.

As soon as the internment of all hostile aliens and suspects has been carried out there will be a lull in the work of the department and the greater part of the staffs of the detection, security, and that sub-section of the internment branch dealing with the apprehension and conveyance of aliens, may be dispensed with. There will still be work to be done for the first two of these sections, which, though far less in volume, will need far greater skill and watchfulness, *i.e.* the watching of suspected neutrals and of disloyal individuals in our own territory, also in neighbouring neutral countries, and the landing of spies and others in our territory. A clever enemy may well reserve his supreme efforts at internal troubles until such time as all suspicions have been allayed: this would appear to have been the cause of the Russian disaster to their great munitions factory at Otcha. The economic section will continue its labours for such time as the economic situation remains disturbed, probably some two or three months at least. The registration branch of the headquarters section may probably find useful work in other directions, such as in the great national registration which has just taken place, since its work for the department will have been completed.

INTERNMENT OF ALIENS.—The internment of hostile aliens must be wholesale and no exceptions of any sort must be made. The danger of exceptions must be publicly realized and applications for such should never be allowed, unless

made by an official in his official capacity and on grounds of public expediency, and any individual found making such an application on obviously insufficient grounds or from private reasons, should be very severely dealt with, even if the alien in question is quite harmless. The danger of such exceptions lies in the precedents created, and owing to close ties of relationship and friendship which are bound to occur between British subjects and aliens of all nationalities, it will be most difficult to avoid extending them without giving offence and creating personal animosity between the officials of the department and the relations and friends of aliens which may seriously interfere with its efficiency. A public education campaign on these points should be among the peace activities of the headquarter section so that the general public should come to realize that they must be as ready to subordinate their loyalty to their relations and friends when these are of hostile origin, as they have shown themselves to be as regards their own material property and comfort. The danger is, in fact, a psychological one owing to the fact that the applications for exemptions being made on purely unselfish grounds, there is an instinctive feeling that no harm can possibly result, and their hostile alien friends and relations are credited with as high a code of morality as they themselves possess, an inference which is most dangerous to make.

Where wholesale interment is, for various reasons, impossible to carry out, its place will have to be taken by the most careful and detailed detective work, and for this there should be two lines, the outer (Security section), being used to veil the inner (Detection section). In this case it will, of course, be impossible to demobilize these sections. The place of interment will have to be taken by a carefully thought out system of restrictions and reportings in conjunction with the detective precautions noted above.

In interment camps the conditions must be such as to encourage the inmates to be ready to take up some useful

economic occupation, according to the diligence displayed in which they should be allowed extra indulgences and privileges. As far as possible these occupations should be chosen with a view (1) to releasing others for military duties or munitions work, and (2) to the capabilities of the interned aliens.

At present interned aliens are, it is believed, allowed a considerable amount of indulgence as regards the spending of private means. It would seem safer to prevent this except under the strictest supervision, and in no case should cash or realisable assets which could be used as bribes or converted into ready money after escaping, be allowed. It is impossible to ensure absolute loyalty in menial servants or in the lower classes, or to make certain that even if loyal, they will realise the importance which a tiny message may have, if allowed to pass through.

It is very desirable that there should be frequent changes of routine at irregular and unexpected intervals in interment camps, and also that prisoners should be shifted from camp to camp at similarly irregular periods, and batches and groups should also be broken up. As far as possible the localities in which they are interned should not be made known to the inmates: all these steps are designed both to prevent communication with possible friends at large and to make arrangements for escape more difficult. The location of internment camps should be especially considered with a view to their distance from possible ports or other jumping off places for an escape out of our territory, and surrounding inhabitants should be instructed in the wiles of escaping prisoners and of what steps to take should their suspicions ever be aroused.

Such, generally are the lines on what it seems desirable a scheme to deal with hostile aliens should be based. Undoubtedly many of the suggestions are very drastic from the view point of a liberty loving civilian in times of peace. The present war and the insidious wiles of our enemies has had a

very great effect on public opinion, however, and it is probable that there would be but little opposition to the measures indicated if introduced at once.

The initial expense starting the department proposed will seem but small, when millions are being spent in every direction like water, and voluntary service will be readily forthcoming whilst patriotism runs high as it does at present. Further, the measures adopted should have an immediate value, and so help to shorten the war and to reduce the cost of it to ourselves and our allies. It is essential then, that whatever measures it is considered desirable to introduce for the future should be introduced at once when there is every chance of their being introduced as a workable scheme instead of being so hampered by consideration of false economy and concessions to liberal and radical sentimentality as to lose all practical value.

LORD HILL.

BY

MAJOR E. G. S. TROTTER, I. A.

It is refreshing in these days of war, waged on the side of Germany by some generals at least of brutal ideas and with no sentiment but that of brute force, to recall the life of one of our great generals of the Peninsular War, and to see how great generalship and valour can be combined with gentlemanly instincts and marvellous kindness of thought.

Lord Hill was one of 5 brothers, all of whom fought in and survived the battle of Waterloo, and his father was welcomed by George the IV. (then Prince Regent) with the salutation, "I am glad indeed to see the father of so many brave sons." It is an extraordinary fact that Hill when a boy showed such a sensitiveness and repugnance to seeing blood, that he fainted on one occasion when he saw a boy's finger being dressed for a cut; that he was ill on another just before he joined his regiment on seeing a human heart preserved in spirits; whilst on a third he was taken fainting, after he had joined the army, from watching a prize fight between Humphries and Mendoza.

To show that in those days also an officer received ample training for his profession, it may be noted that he proceeded to Strasburg to study his profession, getting special leave for that purpose and he later joined on transfer the 53rd Regiment.

The following is an extract from a letter from a major of his regiment to Mr. Hill senior showing in what esteem young Hill was held, . . . "I nevertheless think it will be satisfactory to you, his father, and to Mrs. Hill, to learn from me that as an officer, his talents, disposition, and assiduity are of the most promising nature; and that his amiable manners, sweetness of temper, and uncommon propriety of conduct, have not only endeared him to the regiment, but procured

him the most flattering attentions from an extensive circle of the *first* fashion in this country. And with regard to the regiment and myself, from a selfish point of view, it is with much regret that I look forward to the probability of our losing him ere very long; for with the advantages which he possesses, it is scarcely to be expected that he will wait the common course of promotion in any one regiment."

His first experience of active service was when he served under General O'Hara at Toulon in 1793. His conduct at Toulon attracted the attention of Thomas Graham, later Lord Lynedoch, who, having raised a regiment of infantry, offered Hill the majority on his raising a certain *quota* of men. "This", Hill says, "I did," the regiment being the 90th in which he was destined to win so many honours. His great friend General O'Hara, under whom he had served at Toulon, and who had been captured there, once more appears on the scene and stated that he had been placed in the common gaol and fed on artichoke leaves and bullock's liver. One can imagine the wrath of the fine though hot-headed old general at being treated thus. In 1796 Hill again met the old general, in command of the garrison at Gibraltar, who received him most kindly and entertained him in his own house.

Young Hill's anxiety to get on in his profession is shown by the following letter:—

"I shall be extremely obliged if you will lay the following request before his Royal Highness the Commander-in-Chief:

"Mr. Drake, who is going into Switzerland in a diplomatic line, has offered to take me with him; and as I am desirous of accompanying him to the Continent, with a view of seeing some more service with the Austrian and Russian armies, I shall esteem it a very particular favour if His Royal Highness the Duke of York will grant me permission to go with him. If I find, after a short residence on the Continent, that my endeavours to serve with the armies are of no avail,

I will in that case immediately proceed by way of Leghorn to join my regiment at Minorca. I beg to assure his Royal Highness that the sole motive of my making such a request is an ardent wish of improving myself in my profession."

But, as his biographer says, "The secret of his constant advance at every step and on every occasion was this—that to the most endearing goodness of disposition there was added a fixed, simple determination to do his duty according to the ability he possessed, and, above all, the zeal and devotedness to his country of a patriotic and courageous heart."

On the 1st of January 1800 he was made full Colonel, and later was one of the force of 25,000 men proceeding to Egypt; and once more he met his friend O'Hara. The Admiral, to deceive the enemy had first proceeded to Cadiz and made a feint landing, then returned to Tetuan Bay, and finally to Gibraltar. There O'Hara, who was labouring under impaired health and spirits, and whose tactics were all of the straightforward order, became furiously enraged at the whole proceeding. "What is the meaning of all this pretence of landing at Cadiz, passing backwards and forwards, and all the rest of it?" "It is a diversion, General," was the answer given to the brave and blunt veteran. "*Diversion!*" he exclaimed. "*T*'is a *diversion*, for all Europe is laughing at you. Why, your commander cannot see the length of his nose; and as for your fighting-cock Moore, he has trimmed his tail! Pretty doings!" This ebullition of the worthy veteran was an allusion, in the first instance, to the well-known near-sightedness of Sir Ralph Abercromby; and certainly the general could not regard the rendezvous at Gibraltar with much personal satisfaction, since the price of provisions had been enormously augmented by it. Lord Hill used to mention that being forbidden on account of his illness at that time to eat anything but fresh meat, he was obliged to give three pounds twelve shillings sterling for a turkey, and a guinea for a fowl.

What still more annoyed the general was that Sir John Moore had actually dared the innovation of a crop, and appeared unfrizzled and unfloured upon parade. This was the source of the second remark of the harassed old soldier, who no doubt considered, as many of his years would have done, that with the curls and the pigtail the age of chivalry was gone.

It is interesting here to read in what manner Col. Hill arrived in Egypt, an illustration of what the temper of the Navy was in those days as well as now. Admiral Lord Keith in fact determined to convey the army to Egypt in spite of the opinion of all his pilots who stated that to attempt it was madness, and, as Col. Hill says, "the landing was gallantly made."

On the 13th the British army began to move with the 90th (Hill's Regiment) leading. The French were routed and Hill himself was struck by a musket-ball on the peak of his helmet. He was himself presented by the Capitan Pacha with a sabre, a gold box, and a handsome shawl for the gallant way in which he had led his Regiment, which when attacked by a large body of cavalry received it unbroken with the bayonet and with such a volley, that the enemy were obliged to retreat.

On the 8th September after the evacuation of Cairo by the French, General Hope inspected the 90th and addressed Colonel Hill as follows:—"Sir, considering the service your regiment has gone through, it is impossible a regiment can be more complete than it is at present. I have minutely inspected every part of it, and it is with pleasure I tell you that the whole corps does you and the officers the greatest credit."

Hill's Regiment then proceeded to Malta and then home via Gibraltar, where he heard of the death of General O'Hara. After proceeding home the army of Egypt received the thanks of both Houses of Parliament, and of the Corporation of the City of London. It is of interest to see here how then

as now, the British arms won their way. To quote the biographer, "The achievements of the expedition were of extreme importance; the Arabs were astonished at deeds of arms, of which they had not the remotest conception, and still more at the deportment and integrity of the highminded victors who obtained their confidence and with it an ample supply of provisions. The glittering Mamelukes came again upon the scene, brilliant in costume and marvellous in their feats, and even the dull Fellahs roused themselves into energy under the exciting influence of the soldiers of Great Britain. The sleepy Grand Vizier also, and the Capitan Pacha advanced to meet our troops as friends. Though the Army of India, under Major-General Baird, appeared at Jeddah, on the Red Sea, and was joined by a division of infantry and horse from the Cape of Good Hope, their aid was not required. The triumph had been won and Egypt was cleared of the invaders before any union took place between the first army and these forces, and the whole world was taught that Britons know how to conquer and how to win respect even from the vanquished, whilst the uncivilized spectators of their career reposed the utmost reliance on their honour, as on their strength and their sagacity. Nor were individuals overlooked by the observers of these moments; and it is no slight testimony to Colonel Hill that the presents of the Capitan Pacha, who expressed great regret that he had no worthier offering to make, were the result of the high reputation he had obtained, and the coolness and courage which so fairly won and preserved it."

Colonel Hill in 1803 was appointed Brigadier-General and left his Regiment, whose sentiments were expressed to him in the following address:—

"The officers of the 90th Regiment, in expressing to Colonel Hill their unfeigned and heartfelt pleasure on learning of his appointment of Brigadier-General to the Forces, must, at the same time, assure him that his resigning the command of the regiment fills them with sentiments of the most lively and deep regret.

"On their taking their farewell of an officer who has ever stood so high in their estimation, they feel themselves called upon to declare that the discipline he maintained in the regiment has ever gained it the distinguished praise and approbation of all the General Officers they have ever served with, a discipline so tempered with mildness that must have endeared him to every individual in the regiment, as well as his general attention to their private interest. But their gratitude and private feelings must now give way and be subordinate to the public service, and it is only left for them to indulge the hope that it may be their good fortune to serve under his command, and eventually in his brigade. They are proud to think and reflect on the distinguished honours they gained in Egypt, when he gloriously fell wounded at their head, and hope under his command they may acquire additional glory in future and no less important service. They finally beg leave to assure him that their best wishes for his welfare and happiness ever attend him; and that in every honour he may acquire they will, though absent, always participate."

"Signed, in the name and at the request of all the officers of the 90th regiment.

"RUTHVEN",

Major Commanding 90th Regt.

"Athlone, 1st September 1803."

He then took up a command in Ireland, again distinguishing himself by his tact and sagacity until in October 1805, he embarked as commander of a force of 5000 men proceeding to the continent *via* England. Here once more though in a different way history repeats itself. "In the early part of December the great armies of the Continent were engaged near Olmutz. The uncertain accounts of these operations which came to England, induced Mr. Pitt to risk every thing to send troops to the Continent, and notwithstanding the season of the year, and the dangers of the North Seas we were ordered to proceed. After a tremendous passage and serious losses, some of us had the good fortune to arrive in the Weser on

Christmas Day, 1805." And a miserable Christmas it was, clouded with disasters and ill-tidings. "When I reached that river," says General Hill, "the headquarter ship of every regiment belonging to me was missing; some were wrecked on the Dutch coast, and many souls perished on the Goodwin Sands." No sooner had the general and his lively aide-de-camp, Captain Peebles, stepped on shore, than they were met by an old sugar-refiner who had resided in England, who told them, in the most grotesque attempt to speak their native language, of the triumphs of the armies of Napoleon. Such was the unhappy Christmas of 1805.

The great successes of the French in 1805 caused the return of the forces with which General Hill had gone to the Weser and in January 1806 he once more anchored at Deal. In July 1808 he proceeded with Sir Arthur Wellesley's force to Portugal and took part in the battle of Vimiera which only the caution of Sir Harry Burrard prevented from being a brilliant victory.

Col. Hill's next task was to cover with his brigade the embarkation of Sir John Moore's force at Corunna he having taken a distinguished part in the celebrated retreat. He had stood high in the estimation of Sir John who assured him in a private letter of the great interest he took in his welfare.

In 1809 Col. Hill was placed under the orders of the cautious Sir John Craddock, Commander-in-Chief of the British Army in Portugal, soon to be relieved by Sir Arthur Wellesley.

On the 9th May 1809 he had received orders to move towards Oporto which place the French had reached with considerable loss, only to prove the fallacy of a river being an impassable obstacle however wide or rapid. They had destroyed a bridge across the Douro and congratulated themselves on an imaginary security. Apparently foiled in his designs, Sir Arthur Wellesley ascended the height of Sarea, fully impressed with the importance, especially as regarded the operations of Marshal Beresford, of instantly crossing the Douro. The

glance of his searching eye and the decision of his genius were almost simultaneous, and he determined to pass over, in spite of every difficulty, to a building called the Seminary, at the very point which, from the obstacles it presented, Soult supposed to be perfectly secure. He had previously ordered Major General Murray to cross at Avintas, about four miles above Oporto, with a battalion of the Hanoverian Legion, a squadron of cavalry and two six-pounders, if boats could be obtained for this purpose. For himself, he was resolved, if only one boat could be found, to make his way over the river to the Seminary; and he succeeded in obtaining, unperceived, three or four barges. When the first of these came up, its arrival was reported to Sir Arthur. "Well let the men cross," he answered in an instant and within a quarter of an hour after the words had passed his lips, an officer and twenty-five soldiers of the Buffs were upon the bank occupied by the enemy, and the Seminary was gained without the least symptom of alarm. A second boat followed, then a third conveying General Paget; and scarcely had they stepped on shore, when the city rang with the din of arms, the roll of drums, and the tumultuous shouts of surprised citizens and soldiers rushing to the Seminary. The brave Paget appeared upon the walls, but was instantly wounded and disabled. General Hill, who had crossed in splendid style with the 48th and 66th Regiments, assumed the command. Soult was his opponent, and the assault furious in the extreme. Murray had not come up. The moment was critical; but Sir Arthur had such confidence in Hill, that he was satisfied on the earnest entreaties of those around him, to remain on the spot, surveying the scene of action, and directing the English guns to play upon the enemy. General Hill did not disappoint him. Three battalions were now in the Seminary; and he advanced coolly to the enclosure wall whence he opened such a fire on the columns of the French, that the result was their dispersion and the capture of five pieces of artillery. Sherbrooke crossed, and entered the town in time

to harass the rear of the hostile troops, who were quitting it. Then the forces under Murray were seen descending the steep from Avintas ; and soon the shouts of the inhabitants proclaimed the evacuation of Oporto, and the flight of the enemy on the road to Vallonga. General Hill and his gallant aide-de-camps Captain Currie and Lieutenant Clement Hill, received with the other brave officers and troops, the cordial acknowledgements of Sir Arthur Wellesley, who had, by their aid, achieved the renowned passage of the Douro. "They have marched," said his despatch, "in four days, over eighty miles of most difficult country, have gained many important positions, and have engaged and defeated three different bodies of the enemy's troops."

It is interesting here to pause and to review the situation of the allied forces and to see how history is apt to repeat itself, though the disposition of the enemies' forces may be different. The allies were surrounded by an overwhelming superiority of disciplined forces, whom Bonaparte had directed to crush Wellesley in masses—a design this great general foresaw at the very time the French Emperor, unknown to him, originated it. It is amusing to contrast, however, the commanders of part of the allied forces in those days, as compared with these, for Sir Arthur's coadjutor was General Cuesta whom he found more and more impracticable every day, and who, with the exception of certain ebbs and flows of rash courage, was the completest burlesque upon a commander of an army that can be conceived. For example, he came to meet the British General at a reconnaissance of Victor's position in a coach-and-six, out of which he was jolted by the roughness of the ground, and then he took a nap under a tree. But this drowsiness would have done no harm, had he not obstructed the plans of Sir Arthur by the most inconceivable obstinacy, which the latter mildly designated 'whimsical perverseness of disposition. On the 24th of July, when the enemy had been dislodged without a battle, he actually, in a fit of mad jealousy, rushed forward singly in pursuit of the

French, leaving Sir Arthur alone to exercise the caution he found it necessary to recommend to this heretofore sleepy, obstinate 'old gentleman.'

Col. Hill's remarks too on the Spanish throw a sidelight on their false promises and at the same time on our miserable commissariat. He says:— "The Spanish government has not in any one respect fulfilled its promise in regard to supplying the British army with provisions, in consequence of which, and our own bad commissaries, the troops and horses have been very badly fed of late. Instead of our having supplies to *take on*, the soldiers have not yet had meat or bread for *yesterday*."

The day of Hill's dauger, escape and glory, was now near. The French army had surprised the British. Wellesley was all but captured and once more history repeats itself. The impetuous onset of the enemy caused the British to withdraw with some loss, but with such steadiness and discipline, that they turned upon and checked the forces which attacked them. Though a valley on Hill's left had been taken he attacked it with the bayonet and regained it, but in the evening the enemy's general attack began by the march of several columns of infantry to attack the *height* occupied by General Hill.

Hill himself was actually seized by a French soldier, such was the force of the attack. His horse was wounded and he was struck by a musket-ball on the head which so incapacitated him that he had to leave the field and was ill for the next 2 days. However all agree in their estimate of the great military qualifications he displayed in the battle of Talavera. The enemies attack which outnumbered the British by half, was made on the British alone and the loss of the enemy was 7000 and of the British 4000. But as Hill says "they were fairly beat and in the evening after dusk went off." It is interesting to read General Hill's own description of his escape in the surprise before the battle.

"I recollect on the 27th of July I got some dinner in my quarters in the town of Talavera about four o'clock. Immediately after, I rode out, accompanied by Major Fordyce towards the Alberche, in which direction we heard some firing. I returned to the bivouac of my division, I suppose about sunset, when I found it had moved to take up a position. I instantly followed it, and found it deploying in line, and was shown by somebody where the right was to rest. I pointed out the hill on the line of direction we were to take up. I found, however, I had not sufficient troops to occupy the ground without leaving considerable intervals between the regiments. During this operation I recollect perfectly well I was with the 48th Regiment, in conversation with Colonel Donellan, when, it being nearly dark, I observed some men on the hill-top fire a few shots amongst us. Not having an idea that the enemy were so near, I said at the moment, *I was sure it was the Old Buffs as usual making some blunder.* I desired Donellan to get into line, and I would ride up the hill and stop their firing. On reaching the hill-top, I found the mistake I had made. I immediately turned round to ride off, when they fired and killed poor Fordyce, and shot my mare through the body. She did not fall, but carried me to the 29th Regiment, which Corps, by my orders, instantly charged the French, and drove them from the hill. I do not know what numbers the enemy had, but I think they were not strong—perhaps some of their light troops."

The poor old coach-and-six general had no further part in this affair than sending two pieces of cannon to Sir Arthur Wellesley, when he desired reinforcements against the powerful artillery of the French. He went, however, into a furious rage with his troops for being terrified into confusion, though not attacked, which ended in their *decimation*.

Cuesta's part in the battle would be amusing but for the issues which depended on it. In fact it was impossible that Wellesley should fight longer with the Spaniards though he was still willing to do so for them, for as he had

written to Lord Castlereagh of the action at Talavera—"Nearly 2000 ran off, on the evening of the 27th, from the battle of Talavera, not a hundred yards from the place where I was standing, who were neither attacked nor threatened with an attack, and who were frightened only by the noise of their own fire. They left their arms and accoutrements on the ground. Their officers went with them; and they and the fugitive cavalry plundered the baggage of the British army, which had been sent to the rear."

The lamentable state of affairs in the allied forces shows the wonderful organization and medical care of the present campaign as contrasted with those days. For even Hill by no means a croaker wrote:—"I do not consider our prospects at all mended of late, consequently I entertain the same opinion, I have always expressed, respecting the country. The cause in my mind is *hopeless*, unless war with some chance of success should be renewed between Austria and France—an event which does not seem very probable. Too much jealousy, I fear, exists between us and the Spaniards to give hopes of doing any good by acting together, and little can be expected from our separate efforts, for the Spaniards do not understand the *business*, and we have not *numbers*. Our army is much reduced; it is generally supposed that we have upwards of 30,000, but I assure you we could not bring more than 13,000 into the field. The sickness which prevails is dreadful, and the mortality melancholy. There are not less than 10,000 in the hospitals, besides some hundreds in a convalescent state. The deaths during the last three weeks have, upon an average, been little short of fifty men a day." The difficulties of receiving news were also great apparently, as General Hill says, "It is now 40 days since we heard from England." He had now been promoted to Lt.-General, and, whilst he rested, amused himself by coursing, hunting, and in the chase of wild boar and deer.

That the censorship of those days did not come up to that of the present campaign is proved by the fact that in

his private letters he invariably said of certain information, "do not allow the contents of this letter to appear in public". One letter of General Hill to his sister is of interest as showing the friendliness of the opposing forces "off duty". "On this day week I wrote to Sir John, since which time nothing of consequence has occurred. The two armies remain as they were, the British in the position I mentioned in my last, with the right on the Tagus, and the left on the sea near Torres Vedras, a distance, probably, of about 25 miles. The French advanced regiments are close to us; that is, some of them not more than a mile and a half from the place where I am now writing, with the sentries within musket shot of each other. In this situation we have been for the last month, and I dare say it will appear rather extraordinary when I tell you that we are perfectly good neighbours, and never think of molesting each other. On the contrary, I have been obliged to put a stop to the intimacy, which was going on. It was by no means uncommon to see the soldiers of each army getting grapes out of the same vineyard, water from the same well, and asking each other to drink wine. Indeed, I know of some instances, though not quite correct, of our officers sending to Lisbon for boots and shirts for some of their friends at outposts."

In 1810 the General was granted sick leave after a severe attack of jaundice, but rejoined the army immediately after the battle of Albuera. His return was welcome to Wellington who wrote:—

"Elvas, May 27-1810.

"My dear Hill.

"I am very glad you are returned in good health, and I hope that we shall see you soon.

"You will have heard of events here, which I hope will enable us to obtain possession of Badajos, upon which we are busily employed.

"Believe me, &c.

WELLINGTON,"

and it also excited as Napier says, "the eager rejoicings of the army."

Towards the middle of October Girard's division had crossed the Guadiana and inflicted great annoyance, and Hill conceived that idea of cutting his line of communications, to which Wellington consented. He discovered that Girard was at Arroyo de Molinos and unaware of his movements. He made his dispositions and decided to overtake and surprise the whole force or compel them to fight. The weather was wretched in the extreme; but the soldiers did not fail in a long forced march instantly undertaken in the most perfect quietude, that no symptom of their approach might alarm the enemy. By the evening of the 27th they were at Alcuescar, within four miles of their unconscious foes. Every conceivable precaution was resorted to. The light companies were thrown into the villages to prevent the natives from alarming the enemy, and the cavalry, artillery, and infantry were disposed of in the neighbouring fields, with the strictest orders not to cheer the cold and gloomy night with a single fire, the flickering of which might give indication that they were near. The wind blew furiously, the rain fell in torrents, and the patient soldiery had no protection from the storm, except the drenched coverings of their tents, which the gale had thrown down. But their patience and confidence in the leader they loved deserted them not. They were warmed by the flush of expectation that the morning would recompense them for all their toils, and the first streaks of dawn had not appeared in the horizon, when the various columns fell in, without a single note of a bugle or the beat even of one solitary drum. The ground was admirably chosen with a view to concealment; they filed quietly through the village, and having crossed an intervening mountain, found themselves, just as the day began to break, within half a mile of Arroyo, where Girard was yet in security, ignorant of their presence and his own danger. At this instant a violent hailstorm, pouring on the rear of the allies, caused the faces of the French picquets to be

turned from them; but just as they were ready to make the decisive movement the clouds cleared away, the sky became serene, and the hostile corps were preparing for their march in expectation of a propitious day. The decisive moment had arrived. General Hill was himself inspired, as was every brave man he commanded, with the enthusiasm of the scene. The usual calmness of his demeanour rendered even more than commonly striking by the precautions he had taken for silence, became suddenly converted into an animation that cheered and almost amused every witness of his ardour. It seemed kindled in an instant. He drew his sword,—gave a loud hurrah,—spurred his horse,—and led the charge on the astonished ranks of the French, then forming without a thought that he was so near at hand. The first brigade, headed thus vigorously by himself, moved at once on the village of Arroyo, and the Highlanders catching up the humour of the hour, were heard playing on their bagpipes "*Heigh, Johnny Cope, are you waking yet?*" The second brigade, under General Howard, moved quietly round to the other side of the place, to intercept the troops which the first should drive out. In the centre came the cavalry, ready to act in whatever way might be deemed expedient. Presently the 71st and 92nd Regiments dashed into Arroyo, and came upon the French just as they were filing out, with the exception of one brigade, which had marched for Medellin before daylight. This charge first announced to them the snare into which they had fallen; and with only a feeble effort on the part of their cavalry, they were driven before the bayonets of the British. The French infantry, nevertheless, having emerged from the town, tried to form into two squares with cavalry on their left; but the 71st lining the garden-walls of the town, poured into them an awful fire which was soon succeeded by that of artillery. They fled in utter confusion, and the capture of prisoners, cannon and baggage, rapidly followed. Then came the memorable pursuit of that extraordinary day. Just behind the routed forces of Girard rose the rocky and steep

Sierra de Montanches, up which they clambered in a state of utter confusion, throwing away their arms, ammunition, and knapsacks, and yielding their persons as prisoners to their pursuers at every step. In the excitement of such a chase the British, the Portuguese, and the Spaniards, seemed all to forget that they had been without rest, and soaked with rain and mist all the night before. They laughed, shouted, jumped in their heavy accoutrements, or caught the scrambling horses of the fugitives, who could not ride them over the mountain, and came down mounted in triumph, till fatigue caused some to desist, and the rest being too much scattered, were judiciously stopped on the summit of the Sierra by General Howard. Nearly fifteen hundred prisoners were taken and some of them of high rank. Lieutenant Blakeney, of the 28th, leaped over a wall, and seized the Prince D'Aremberg in the midst of a group of officers. General Burn was also taken, with a colonel of cavalry, an aide-de-camp of Girard, two Lieutenant-Colonels, a commissaire de guerre, and no less than thirty captains and inferior officers. Girard himself, with a handful of men, escaped by the bridge of Medellin, declaring he would rather die than surrender. It was altogether a most brilliant achievement, and is thus eloquently adverted to by Major Sherer in his recollections of the day. "One thing in our success at Arroyo de Molinos gratified our division highly; it was a triumph for our General, a triumph *all his own*. He gained great credit for this well conducted enterprise and he gained what to one of his mild, kind, and humane character was still more valuable a solid and bloodless victory, for it is certainly the truest maxim in war, that conquest is twice achieved, where the achiever brings home full numbers."

That Wellington appreciated his services on this occasion is clear from the following:— "It would be particularly agreeable to me if some mark of the favour of his Royal Highness the Prince Regent were conferred upon General Hill; his services have been always meritorious, and very distinguished in this coun-

try, and he is beloved by the whole army." He adverted to his various gallant acts, from the passage of the Douro to the last operation at Arroyo, and continued, "In recommending him as I do most anxiously, I really feel that there is no officer to whom an act of grace and favour would be received by the army with more satisfaction than on General Hill." The congratulations Hill received from his brother officers were numerous and flattering. General Murray wrote, "I feel a peculiar pleasure in this fortunate affair, as it concerns yourself personally, and assure you that I only repeat the sentiments which are in the mouth of everyone whom I have heard speak upon the subject." Marshal Beresford remarked, "I confess I did not think Girard would have allowed himself to be overtaken; but you completely out-manoeuvred him, and the thing is complete," and his after proceedings were worthy of the admiration they excited. He gave the artillery he had taken to the Spaniards, for which he received glowing letters of thanks from Castanos; and he treated his prisoners not only with the courtesy of a gentleman, but with the kindness of genuine heroism. Lord Wellington attached much importance to the capture of the Prince d'Aremberg, from his connection with the Imperial Family, and enjoined strict vigilance over him; yet General Hill executed this delicate duty so as to elicit from his illustrious charge the warmest expressions of gratitude. We have seen how his friends wrote to him: the letter of his prisoner just before he was sent to England equally deserves attention:—

"Lisbonne, ce 3 Xbre, 1811.

"Mon General.

"Au moment de m'embarquer pour l'Angleterre, je regarde comme un devoir de vous renouveler mes remerciements pour toutes les bontés dont vous m'avez comblé pendant le temps que j'ai été avec vous. Croyez, mon General, que je serais heureux, si l'occasion se présentait, d'être utile à quelques officiers de votre division; ils pourront partout me reclamer avec confiance.

"J'ose de vous prier de faire passer les lettres ci-jointes à Badajos; c'est une affaire d'intérêt que je desire terminer avec mon chef d'escadron.

"Veuillez agréer l'assurance du profond respect avec lequel j'ai l'honneur d'être, mon General, votre très humble et très obéissant serviteur.

"LE DUC D'AREMBERG."

The Military Secretary to the Commander-in-chief wrote to him in the following handsome terms:—

"*Private.*

"H. Guards, Dec. 8, 1811.

"My dear General,

"I beg your acceptance of my most sincere congratulations upon the brilliant success which has attended your expedition against the French force under General Girard. After the flattering testimony which has been borne of the public approbation, I shall not render myself liable to the imputation of flattery, by the expression of my individual opinion that the previous arrangements of the surprise of the enemy, and the promptitude of execution, reflect upon you a degree of credit as a general which few indeed have had the good fortune to attain. The whole country are united in one voice of approval; and I heartily rejoice that such a distinguished reward has attended your unremitting and laborious services. The public approbation, though inconsistent and whimsical, has charms in it, which, as a soldier, I should appreciate much beyond any favour unsupported by general and well-earned applause; and therefore I take double pleasure in the justice which is universally done to your distinguished conduct."

In 1812 he was invested with the K. C. B. though his modest nature shrank from the change. "When he was knighted," says an esteemed officer on his personal staff, "there was not one of us dared for nearly six months to call him *Sir Rowland*: he was quite distressed at being called any thing but *General*; and it was only very gradually that he could be driven to bear his honour." His letter to his brother on the subject is amusing. "Mr. Nayler, in his letter to me says, on being favoured with my wishes on the subject of supporters, proper sketches shall be sent to me. Now, my dear brother, I do not wish you to go to town on purpose, but when you do go I shall

be obliged if you will see Mr. Nayler; and knowing you to be a man of taste, I wish you would give him some hints on the occasion. Perhaps by consulting our friends at Hawkstone my acquirements might be arranged to the best advantage: for my part I do not care much what the supporters are, but, I must confess I do not much like fancy figures, such as I have seen to some arms, supported by a *jolly tar*, a *grenadier*, a *light infantry man*, or a *heavy or light dragoon*; such I think, are bad. It strikes me that animals are the handsomest. Some have lions; you and I, probably, would have no objection to a *greyhound*, while there are others who would prefer the *fox-hound*: but upon the whole I should be glad to leave the choice to the ladies; they have more taste than we have."

On 24th April 1812 Hill was ordered to surprise Almaraz which operation closely resembles that of Napoleon when he before the battle of Marengo took the fortress of St. Bard. The account of the operations is as follows. "At Jaraicejo the troops were formed into three columns, and a night march was undertaken with a view to attack at the same instant the brigade of Almaraz, with its forts, the tower of Mirabete, and a fortified house in the pass. Never was a movement better arranged; but the column destined to descend from the Sierra, by the pass of Cueva, on Almaraz, had not come down half way from the rugged mountain ere daylight unveiled its approach; and the other two found both the Castle of Mirabete and the pass of that name so defended by the enemy that, under the circumstances of the moment, it would have been madness to attack. The only course was to bivouac on the mountain; and the 17th and 18th were spent in reconnoitring: but there seemed not a ray of hope of forcing the pass, or of discovering a single spot on the wild ridge where artillery could either proceed or be let down. Many a man would have given up the attempt in despair, but the genius of our hero shone forth more conspicuously in the gloom of disappointment. At nine o'clock in the evening of the 19th he led a brigade down the mountain by a goat's path, and by the

morning's dawn had halted it in concealment on the left bank of the river, about 800 yards from a fort called Napoleon. By eight the rear came up and the troops were formed; but the hills hid them from the French, who had no conception that they were at hand. First there was a feint made upon Mirabete; and the enemy's soldiers crowded on the parapet of their work to look at this attack. Then rushed the assailants in earnest on Fort Napoleon, which covered the bridge of Almaraz. Its defenders never dreamed of an attack till the sight of the ladders, still stained with the blood of Badajos, and the opening of the fire, roused them into a sense of their danger, which they made instant efforts to avert. But they were all in vain: the parapet was soon mounted by the British soldiery; resistance in the interior was quickly suppressed; the defenders gave way, and leaving the tower and entrenchment, fled to the *tête de pont*. Their entrance into this work, and that of their pursuers, were simultaneous. The confusion was tremendous; and all hope of escape being destroyed by the removal of the boats by the first of those who fled, numbers fell into the river and were drowned, while about 250 were taken prisoners. The guns of Fort Napoleon were soon pointed by the victors against Fort Ragusa, on the other side of the river, and quickly ejected its commandant. Attention was now turned to the passage of the river, and some of them leaped in, swam over, and brought back the boats. Two grenadiers, James Gould and Walter Somerville, led the way; and their gratified General presented them each with a handsome sum of gold, when they returned with the boats from their perilous adventure. The river was immediately passed. Then followed a rapid destruction of the towers, the stores, the ammunition, and at last of the boats; and at night the successful troops reascended the Sierra, bearing the enemy's colours in triumph, and with them more than 250 prisoners, including one commandant and sixteen inferior officers, the entire loss of the British amounted to 15 officers and 162 privates, killed or wounded. How his services on

this occasion were appreciated is shown by the following letter of Lord Bathurst to Lord Wellington:—"Your Lordship will have the goodness to take the earliest opportunity of conveying to Sir Rowland Hill His Royal Highness's approbation of the distinguished skill, decision, and vigour displayed by Sir Rowland Hill on this occasion, and of the firmness and intrepidity so eminently manifested in the reduction of the redoubt of Fort Napoleon by Major General Howard, and the officers and troops under his command. I am commanded by His Royal Highness to mark his satisfaction of the loss of officers and men being, comparatively speaking, so small, more especially as it appears that it is in a great measure owing to the judicious arrangements made by Sir Rowland Hill previous to his making the attack."

The feeling of the troops under Hill's command to their general were extraordinary. No general ever used less severity, yet the fear of offending *him* acted on the minds of his soldiers far more effectually than the dread of punishment, which was recklessly braved when unsparingly administered. "The great foundation of all his popularity was increased and strengthened as soon as he was seen. He was the very picture of an English country gentleman. To those soldiers who come from the rural districts of Old England, *he represented home*—his fresh complexion, placid face, kind eyes, kind voice, the total absence of all parade or noise in his habits, delighted them. The displeasure of Sir Rowland Hill was worse to them than the loudest anger of other generals; and when they saw his countenance bright with the expression that all was right, why, they were glad for him as well as for themselves."

In the long marches which they had to make and during various halts which occurred he always endeavoured to afford them all the relief in his power from the monotony of a camp life. This applied to the Staff also, and at Galisteo on the 4th of May 1813, the 28th Regiment which had signalized itself in Albuera, determined on the 16th the second anniversary of that battle, to give a dinner to Sir Rowland and the

Staff of the second division. But they had neither tables nor chairs. This did not deter them from their purpose, and ingenuity, never wanting where there is inclination, soon invented a mode of giving a banquet *al fresco*. Lieutenant Irwin selected the softest and most even piece of turf, he could find, on which he marked out the due length and breadth of a table for no less than one hundred guests. The turf was carefully pared off, and a trench was dug round it large enough for all the company. The table was formed in the centre of the sods and mould, duly levelled, and excavated to give ample room for the legs, and then the green turf was once more gently laid on and supplied the place of a table-cloth. Each officer invited was desired to bring his own knife, fork, and plate, and not to be particular about having them changed. The cookery was of the substantial order, the heavy artillery of field *cuisine*. There were ponderous joints roasted and ponderous joints boiled; there was soup in abundance, in which the shreds of meat gave assurance that it was at least unsparingly concocted; there were pies baked in camp-kettles turned upside down, of dimensions and quality Friar Tuck would not have disdained. Then came the cordial welcome of the chief guest, the man who never had an enemy but on public grounds, whose bland smile set the company at ease, while his genuine dignity prevented in his presence every word and every act that did not perfectly become it.

General Hill's sympathy with the unfortunate Portuguese is best shown by the following 2 letters:—

“Barquiseda, June 20.

‘ My dear Lord,

“I am sorry to have occasion to address your Lordship again on the subject of provisioning the Portuguese division under my orders, after the instructions which I have received from you; but they are at present in so destitute a state that I feel it my duty to make your Lordship acquainted with it. They for some days have been on very reduced rations. The day before yesterday they had only three quarters of a pound

Lord Hill

1

I am in receipt of your letter of the 1st instant and I am sending you this to say that I am sorry to inform you that it is not possible for the British Govt. to do anything to assist you.

Yours truly

J. E. Hill

Letter to Wellington & Co.

The following is possible and shows the following
to —

June 1. 1861. From the U.S.A.

To Sir J. E. Hill

I have just received your note of this morning. You may know that I am not in the position to be of any service to you in this case but if you will let me have full details of the same I will do what I can to assist you and you can then make application to the American Consul.

This office has kindly
afforded me

Letter from Sir J. E. Hill & Co. to

They informed me that the name of Thomas and about the time
of writing a communication was by General Hill to General of one of the survivors —

Elizabeth, June 11. 1861

To Mr. J. E. Hill

I have recently received the enclosed communication
and although I did not appear in the room the conversation
which I had the honour to hold with your Excellency on the
subject, was far from dangerous or violent
on the occasion alluded to by him I think it my duty to notice
to that officer to state that the two American
institutions and the other government of Pennsylvania were
received by government to make the necessary arrangements on
the ground and reported to me within less of time and
there was no objection found in carrying out your Excellency's
wishes from them. I desire entirely with me and I will enclose

Staff of the second division. But they had neither tables nor chairs. This did not deter them from their purpose, and ingenuity, never wanting where there is inclination, soon invented a mode of giving a banquet *al fresco*. Lieutenant Irwin selected the softest and most even piece of turf, he could find, on which he marked out the due length and breadth of a table for no less than one hundred guests. The turf was carefully pared off, and a trench was dug round it large enough for all the company. The table was formed in the centre of the soil and mould, duly levelled, and excavated to give ample room for the legs, and then the green turf was once more gently laid on and supplied the place of a table-cloth. Each officer invited was desired to bring his own knife, fork, and plate, and not to be particular about having them changed. The cookery was of the substantial order, the heavy artillery of field *cuisine*. There were ponderous joints toasted and ponderous joints boiled, there was soup in abundance, in which the shreds of meat gave assurance that it was at least unsparingly concocted; there were pies baked in camp-kettles turned upside down, of dimensions and quality Friar Tuck would not have despised. Then came the cordial welcome of the chief guest, the man who never had an enemy but on public grounds, whose wide smile set the company at ease, while his genuine dignity prevented in his presence every word and every act that did not perfectly become it.

General Hill's sympathy with the unfortunate Portuguese is best shown by the following 2 letters:—

"Barquisimeto, June 21.

"My dear Lord,

"I am sorry to have occasion to address your Lordship again on the subject of provisioning the Portuguese division under my orders, after the instructions which I have received from you; but they are at present in so destitute a state that I feel it my duty to make your Lordship acquainted with it. They for some days have been on very reduced rations. The day before yesterday they had only three quarters of a pound

of meat and yesterday nothing, and have no prospects for this day. To give them bread I am aware is out of the question, but I beg to know whether your Lordship will permit me to give them some meat?

"I have &c.

"R. HILL".

Marquis of Wellington, &c. &c.

This application was irresistible, and elicited the following reply:—

"June 20 1813, half-past 1 P.M.

"My Dear Hill,

"I have just received your note of this morning. You may assist the Conde d'Amarante as you please, but let the Conde know that it is an exception to a rule to which I am determined to adhere, and that he must make his commissaries exert themselves.

"Ever yours most faithfully,

"WELLINGTON.

Lieut.-General Sir R. Hill, K.B. &c.

Then followed the battle of Vittoria and about this time was written a characteristic letter by General Hill in defence of one of his subordinates:—

"Elizondo, July 10 1813.

"My dear Lord,

"I only yesterday received the enclosed letter from.....; and although it did not appear to me from the conversation which I had the honour to hold with your Lordship on the subject, that you felt any displeasure towards.....; on the occasion alluded to by him, I think it my duty in justice to that officer to state, that the very moment your instructions for the closer investment of Pampeluna were received, he proceeded to make the necessary examination of the ground, and reported to me without loss of time. And if there was any improper delay in carrying out your Lordship's wishes into effect, it rested entirely with me, and I feel myself

fully satisfied with.....'s desire to exert himself on that occasion, and should be sorry if your Lordship thought otherwise.

"I have, &c.
"R. HILL.

Marquis of Wellington,

"&c. &c. &c.

The following incident concerning O'Donnell, Conde de l'Abispal, is somewhat amusing. The Conde was always looking out for some opportunity of distinction. On one occasion in the Pyrenees, when Sir Rowland had obtained an advantage, O'Donnell became exceedingly angry at not having been called out into a more effective position, and considered himself deprived of the glory he would certainly have acquired. "O'Donnell is in such a rage," said Sir Rowland quietly to Lord Wellington. "Never mind, I'll find plenty for him to do another day," was his Lordship's reply. The day came; he was put forward with his troops in a ravine; the French enfiladed them; O'Donnell did not flinch, but was angry no more. "From that day," Lord Hill used to say, "I never saw him nor heard from him."

Hill's great day was yet to come. The enemy who had failed in all their attempts with their whole force upon Lord Wellington's left, withdrew to their entrenchments on the night of December 12th, and passed a large body of troops through the town of Bayonne. With these, on the morning of the 13th they made a desperate attack on Sir Rowland Hill. This, as has appeared, was not unexpected; and Lord Wellington had placed at his disposal not only the sixth division, but the fourth division, and two brigades of the third. Soult's objects were to gain the position of St. Pierre, to make himself master of the road to St. Jean Pied de Port, and to break through the allies. For these purposes he put forth his whole strength, and was completely vanquished. Even before the sixth division arrived, Sir Rowland had repulsed him with prodigious loss; and although he skilfully

availed himself of a high ground in retreating, he could not stand against the famous charge of General Byng and was entirely defeated. It was a battle fought and won by the corps of Sir Rowland Hill alone and unaided. At the instant of victory Lord Wellington came up, and in the ecstasy of the moment of triumph caught him by the hand and said, "Hill, the day is your own."

General Hill had already earned the title of "Father Hill" from his soldiers which was confirmed under the following circumstances.

Lord Wellington had addressed a note to General Fane in which he said, "The intercourse going on between our soldiers and the French has increased to such an extent, that I have been under the necessity of giving out another order upon the subject." The fact was, the officers had become quite intimate with each other, and the men carried on a regular traffic upon a rivulet running between the two armies. A great stone was placed in the stream, and on it a canteen was put containing money. After a time this was found filled with brandy. One evening the French sentry failed to supply the brandy to a man named Patten, who was, as he supposed tricked out of his liquor. He dashed across the stream in the morning, seized the French sentry, stripped him, and carried his accoutrements in triumph to the picket house. A flag of truce soon afterwards appeared, and the French captain who came with it begged hard for the return of the things taken from the sentry, on the ground that if they were returned, his own commission and the sentry's life would be undoubtedly forfeited. "I have got them in pawn," said Patten, "for a canteen of brandy;" but he gave them up, and refused to accept money offered him by the officer. Still, poor Patten was sentenced to receive 300 lashes. Sir Rowland had the delinquent led out with great parade, as if to undergo this severe punishment, and addressed a remonstrance to all the regiments on the indiscretion and probable consequences of such conduct. But, at length, he unexpectedly enumerated many acts

of gallantry performed by the prisoner, and, in the midst of faces beaming with admiration, remitted the sentence.

His coolness under adverse circumstances was extraordinary as is evinced by the following, narrated by one of his staff. The passage of the Garonne was found impracticable, and Sir Rowland's troops were withdrawn to St. Roques. In the night of the 30th a new bridge was laid near Pensaguel, and he passed with two division of infantry. He used sometimes in conversation to mention the great trouble these bridges cost him. "For instance," he would say, "at a point where all seemed most promising, I found we had not enough to cross by exactly *one* boat, and we had all our work to do over again at a narrower place." I shall never forget the coolness with which he mentioned this provoking circumstance; and some person present remarked, that he was no doubt just as cool when it happened.

An armistice had now been declared and the Duke of Wellington, now raised to that illustrious rank, soon returned to Toulouse. Peerages were conferred on five of his generals; in which honoured list appeared the name of Sir Rowland, as Lord Hill of Almaraz and of Hawkstone.

The modest and retiring Hill now had willy nilly to share in the civic honours showered on the victorious generals. Two swords were placed before the Chamberlain, with a gold box containing the freedom of the Corporation, long previously voted to Lord Beresford. The Chamberlain addressed Lord Hill in a most appropriate manner, neatly alluding to the fact that his ancestor, of the same name, was the first Protestant Lord Mayor of the city of London. He then presented the sword, and Lord Hill was completely overcome in endeavouring to return thanks. Lord Beresford next received his sword and the box before mentioned. No sooner were these ceremonies over, than all present crowded round both the heroes, and a hearty shaking of hands took place, such as has not been witnessed since those day of joy at our deliverance from a long and awful war. It was carried to such

an extent, that old Blucher one day, lifting up his aching arm, exclaimed "*Me shake at hands none more.*" His visit to Shrewsbury was a veritable triumph. The streets were filled with thousands who came pouring in from every quarter. The trees on the road by which he entered were adorned with flowers, and the very road itself actually strewed with them. Thirteen hundred children of the charity and Sunday schools, were so placed as to be amongst the first whose shouts should hail him as their benefactor and friend. The yeomanry came out to be reviewed by him on his way, and formed part of the procession which accompanied him into the town. Lord Kenyon rode next to Lord Hill, who was attended by his gallant brothers and aide-de-camp. Out of respect to the memory of the late Colonel Hill, the trappings of Lord Hill's horse were of black, a marked contrast to the uniforms of fourteen troops of cavalry that followed in his train. The decorated fronts of the houses were occupied by ladies, whose handkerchiefs waved over the heads of the cheering multitude beneath them.

There seemed to be no end to the festivities, and the eagerness of the people was every moment on the increase. The freedom of the Corporation was voted to Lord Hill and his gallant brothers; and, in order to gratify the populace, it was determined that the presentation should take place in the beautiful garden of Mr. Rocke, facing the Quarry—a romantic promenade belonging to the town, where a prodigious concourse had gathered. When the ceremony was over, his Lordship addressed the crowd from the back of a sunk fence between the garden and the Quarry. But this was not enough. The shaking-hands mania of the capital had reached the provinces. Hundreds of hands were extended over the bank, so he good-naturedly knelt upon the top of the fence, and shook heartily as many as he could reach. In the afternoon there was a profusion of tea and cake provided for the women and children. Lord Hill, who dined at Mr. Rocke's, every now and then

appeared on the terrace; but the people were determined to have him out. An escort of gentlemen was formed to attend him, but, seeing the immense throng, he at first declined going into the Quarry. He, however, yielded and went; but was obliged to retreat, such was the overwhelming rush to get near him. A *diversion* was tried. "That's Lord Hill," said one of the escort, pointing to another gentlemen. Away went some of the multitude who had not seen him; and the subject of the *ruse* was obliged to make his escape as fast as he could. Lord Hill acknowledged that he now certainly did run away for the first time—not from his enemies, but from his friends. "I never did," he said laughing, "fly from the *fury* of my enemies; but I have been now obliged to do so from the *kindness* of my friends."

The Salopians did not suffer these and other transient honours to be all they offered. A splendid column was erected—near Shrewsbury, which is one of the noblest Doric pillars in Europe. A vignette in the title-page of this volume correctly represents it. It is called Lord Hill's Column, and has been conveyed to his family.

In March 1815 he had once more to don harness the following ominous note having been received by him:—

"Tuesday morning, 8 o'clock.

"My dear Lord,

"Two gentlemen arrived last night from Ostend. Their account is very bad. The King of France has lost Lille, &c., and is *in Ostend*. Bonaparte is on the frontier, but no large body of his troops yet arrived. Government is anxious you should go out *immediately*, as it is of the greatest importance that you should prevent any rash action, and also that you should persuade Louis to retreat upon Holland, rather than come to England. Pray call in Downing Street at three o'clock.

"Yours very truly,
H. E. BUNBURY."

His consideration for his troops at all times is shown by a letter addressed by him as follows to Prince Frederick of the Netherlands:—

“Grammont, May 17, 1815.

“Sir,

“Your Royal Highness having been pleased to say that you would allow me to see your Corps, I shall be happy to have that honour whenever it may be convenient to your Royal Highness for me to do so.

“Considering that your Corps is rather dispersed, it is by no means my wish to give the troops a long march, for the purpose of collecting at any particular point. I can ride to their several cantonments, and see them in brigades or divisions, or in any manner you may be pleased to fix. I have only to request that your Royal Highness will have the goodness to let me know the arrangements you make on the occasion, in order that I may be punctual to the time, and not keep the troops waiting.

“I have the honour to be,

“Your Royal Highness’s very obedient
and faithful servant,

“HILL.

“H. R. Highness Prince Frederick of the Netherlands,
&c. &c. &c.”

Again once at a review he was heard to say to an officer, “Let us shorten these manoeuvres; it is very hot: you must not fatigue your men.” A whisper ran through the ranks, “Bless him! there he is: *Father* Hill again!”

He next took part in the battle of Waterloo the night previous to which was spent by him and his staff in a small house by the side of the road leading from Brusses to the field. At the commencement of the day, his corps was on the slope of Merke Braine to the right of the general line. Later in the day it advanced, and added greatly to the decisive issue. As the whole army moved to the left, the divisions of Lord Hill’s force came up, and were engaged

in the thickest of the battle. His Lordship's own station was on a spot where a little rise enabled him to see the enemy's movements. It was a post of great danger from its exposure to the shot, which flew about him in every direction; but he remained there, coolly marking all that he deemed of importance, and only leaving it occasionally to animate by his presence any faltering portion of the line. He manifested the same energy as at Arroyo de Molinos. His usual gentle and reserved demeanour was exchanged for a decisive and spirited air of command, regulated by most consummate prudence. He had foreseen the dreadful attack made by the Imperial Guards; and, having placed himself at the head of a brigade, contributed greatly to the last decisive repulse of the choicest troops of Napoleon.

Sir Digby Mackworth, who was on the staff of Lord Hill, has kindly communicated what he witnessed of his General's efforts at the grand crisis of the day. "He placed himself," Sir Digby states, "at the head of his Light Brigade the 52nd, 71st, and 95th, and charged the flank of the Imperial Guard, as they were advancing against our Guards. The Light Brigade was lying under the brow of the hill, and gave and received volleys within half pistol shot distance. Here Lord Hill's horse was shot under him, and, as he ascertained the next morning, was shot in five places. The General was rolled over and severely bruised, but in the *melee* this was unknown to us for about half an hour. We knew not what was become of him; we feared he had been killed; and none can tell you the heartfelt joy which we felt when he rejoined us, not seriously hurt." When the tremendous day was over, Lord Hill and his staff again re-occupied the little cottage they left in the morning. His two gallant brothers, Sir Robert Hill and Colonel Clement Hill, had been removed wounded to Brussels; the party was, nevertheless, nine in number. A soup made by Lord Hill's servant from two fowls was all their refreshment, after hours of desperate fighting without a morsel of food. Lord

Hill himself was bruised and full of pain. All night long, the groans and shrieks of sufferers were the chief sounds that met their ears. It was to them all a night of the greatest misery. The men whom the nations of Europe were about to welcome with acclamations, and to entertain in palaces, could only exchange sigh for sigh with each other in a wretched cottage. Such is war even to the winners. May a gracious God soon make it to cease in all the earth !

The last remark of the reverend biographer might well be echoed in these days.

Sir Digby Mackworth's memorandom is interesting as a comparison between the battle of Waterloo and some incidents in the present campaign :—“The cavalry and infantry repeatedly charged in masses, under cover of a tremendous fire from 240 pieces of artillery. Four times were our guns in possession of their cavalry, and as often did the bayonets of our infantry rescue them. For upwards of an hour our little squares were surrounded by the *élite* of the French cavaliers: they gallantly stood within forty paces of us, unable to leap over the bristling line of bayonets, unwilling to retire, and determined never to surrender. Hundreds of them were dropping in all directions from our murderous fire, yet as fast as they dropped, others came up to supply their places. Finding at last that it was in vain to attempt to break our determined ranks, they swept round our rear, and rushing into the Nivelles road attempted to cut their way back to their own lines; but the whole road was lined with our infantry on both sides, and at the advanced part of it was an almost impassable barricado of felled trees. Here fell the remainder of these gallant Cuirassiers, of whom not one was taken without a wound. The cannonade continued without intermission; and about six o'clock we saw heavy columns of infantry supported by dragoons returning for a fresh attack. It was evident it would be a desperate, and we thought probably a decisive, one. Every one felt how much

depended on this terrible moment. A black mass of the Grenadiers of the Imperial Guard, with music playing, and the great Napoleon at their head, came rolling onward from the farm of La Belle Alliance. With rapid pace they descended. Those spaces in our lines which death had opened and left vacant, were covered with bodies of cavalry. The point at which the enemy aimed was now evident; it was an angle formed by a brigade of Guards, and the light brigade of Lord Hill's corps. Lord Hill was there in person. The French moved on with arms sloped, *au pas de charge*. They began to ascend the hill. In a few seconds they were within a hundred paces of us, and as yet not a shot had been fired. The awful moment was now at hand. A peal of ten thousand thunders burst at once on their devoted heads. The storm swept them down as a whirlwind which rushes over the ripe corn; they paused; their advance ceased; they commenced firing from the heads of their columns, and attempted to extend their front; but death had already caused too much confusion among them; they crowded instinctively behind each other to avoid a fire which was intolerably dreadful. Still they stood firm—*la garde meurt et ne se rend pas*. For half an hour this horrible butchery continued. At last, seeing all their efforts vain, all their courage useless, deserted by their Emperor who was already flown, unsupported by their comrades who were already beaten, the hitherto Invincible Old Guard gave way, and fled in every direction. One spontaneous and almost painfully animated 'Hurrah!' burst from the victorious ranks of England. The line at once advanced, generals, officers, soldiers, all partaking in one common enthusiasm. The battle was over. Guns, prisoners, ammunition, waggons, baggage horses, successively fell into our hands. Night and fatigue compelled us to halt. We halted on each side of the Genappe road, and in a short time numerous columns of Prussians came pouring along in pursuit of the enemy. Each battalion cheered us in passing. The officers saluted, and many embraced

us. Never was witnessed a more enthusiastic moment. We felt amply rewarded for the exertions of the day. The Prussians continued the pursuit without interruption. Lord Hill and staff retired to a small cottage where we now are. We have but one room between nine of us, including his Lordship. All but myself are asleep."

Lord Hill's remarks on that occasion may also be of interest! "With respect to the state of public affairs, it is difficult for me to say what it is. I fear, however, that the Bourbons are not very popular, and that the Jacobins and other parties are kept in order entirely by the great armies which are in this country. One thing I am quite clear should be done, which is, that the Allies ought not to leave without so completely clipping the wings of France as to render its government, be it what it may, totally incapable of disturbing the peace of Europe again: the only way of doing which is to disband all the present forces, and to occupy with foreign troops, for some time to come, all the strong towns on the frontiers of France. I am also of opinion that all Napoleon's trophies ought to be removed, and all he plunder taken by him restored to its proper owners."

The biographer's remarks on Lord Hill's military career are summed up in the following sincere though somewhat tilted language:—

"We have now traced the career of Lord Hill through the most stirring periods of his active military life, passed without failing in any undertaking, or having made one personal enemy. Conscious of his own powers, he veiled them with an unequalled modesty, so that jealousy was disarmed. Whatever opportunities were placed in his way, he never used them to enrich himself, and his nature was too noble to make the character of another a stepping-stone to his own fame. With powers of mind adequate to the most original military conceptions, he was, as to orders from his principal, most punctiliously obedient; and if ever he did take a step not prescribed, it was always in accordance with instructions,

and led to some brilliant achievement without the precedent of infringing any rule".

THE PROVISION OF A RESERVE OF OFFICERS FOR THE INDIAN ARMY FOR FUTURE CAMPAIGNS.

By

MAJOR B. P. ELLWOOD 31ST D. C. O. LANCERS.

Under the nomenclature "officers" it is to be understood that reference is made to British Officers only. To increase the supply of Indian Officers is simple enough—by promotions from N.C.Os.

The present war has shown that given certain favourable conditions men willingly come forward to offer themselves for commissions in large numbers. After twelve months of experience a number of weak points in the existing arrangements are clearly in the lime-light. Plans for the provision of officers for the Indian Army for future campaigns must be based on the evasion of these weak points and the adoption of such conditions as will popularise the movement and not jeopardise the whole construction for the proverbial modicum of tar. The following appear to be the weak points of the existing arrangements under which a reserve of officers has been obtained:—

- (a) Insufficient military training of candidates receiving commissions.
- (b) Many had no knowledge of Hindustani, whilst others only a smattering.
- (c) For the cavalry arm many were very indifferent riders.
- (d) Many were really too old for their appointments.
- (e) Recruiting not on any system.
- (f) Owing to the non-existence of any systematic preparation prior to the war, candidates were not in the first instance posted to the arm most suited to their abilities.
- (g) The expense of paying Government Civil Servants at their civil rates is considerable,

There is no doubt that a large number of candidates had at some period of their lives served in the Volunteer Force. But it soon became evident to those who had the training of these officers that they possessed at best a very superficial knowledge of their drill, whilst they were quite ignorant in all the remaining military subjects and duties. To commence with, except those who had passed through the Indian Army into civil appointments, none had ever served with Indian regiments and consequently they could not possess any knowledge of the interior economy of a regiment. Indian Military Law was naturally a closed book to them. Equally naturally they lacked the "imagination" necessary to work out the smallest military tactical problems; their minds had to be trained to meet the new situation. Time was therefore necessary to train these candidates in every branch of their work and this became very difficult with depleted regiments and under the retarding influences of a hot season. Consequently their want of training militated against their employment in a campaign of short duration. Certainly this was not peculiar to the Indian Army.

Men of all ages, from every profession, and from all parts of India, Burma and the Federated Malay States offered themselves. The natural result was that many were really too old to learn entirely fresh subjects and these of a subordinate nature requiring much attention to matters of detail which at their time of life gave the greater trouble to master; whilst the large recruiting area produced many candidates from districts in which Hindustani is either not spoken or spoken in such a manner as to be recognisable as such with difficulty and in consequence these recruits suffered accordingly. These had then to study Hindustani on joining the regiments to which they had been appointed and thus reduced the hours available for instruction in matters military.

Horsemanship and horsemastership were very far short of the standard required for cavalry. The necessity for instruction in these further retarded progress among cavalry candidates.

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Owing to unforeseen difficulties candidates could not be selected for that arm of the Service for which their abilities and civil profession fitted them the best. I can recall the case of one officer of this reserve who having elected for cavalry, carried out his full training with that arm and eventually found his home in the repair department of the Mechanical Transport Section somewhere in France. With recruiting on a system and an organized reserve candidates could be posted according to their qualifications.

There are civil servants drawing rates of pay which showed that they had attained considerable seniority in their own service. If pay is any indication their value to their own profession must have been considerable, whilst it would appear that there must have been many junior to them whose ages would have better fitted them for service in the Reserve of Officers, whilst with their less experience their temporary transfer to the Army would not have caused so serious a gap in their own service as that possibly occasioned by the departure of those in the senior grades.

Briefly put these are the salient defects which the past twelve months' experience has brought to light.

Whether the system be on a voluntary or compulsory basis there are two main arteries of supply: from among Government Servants and from among those not in Government service.

Until we have some idea of our requirements we cannot come to any final decision as to our methods of obtaining them.

REQUIREMENTS.—The various services and arms of the Indian Army requiring a Reserve are the Cavalry, Artillery, Infantry, S & T Corps, I.M.S, Sappers and Miners, and the Army Pay Department. These can be appropriately divided into two classes, namely those requiring special treatment and those for whom recruiting can be on a general basis.

In the first group fall the Artillery, I.M.S, Sappers and Miners, and the Army Pay Department. In the second group are the Cavalry, Infantry and S & T Corps.

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The numbers required for the first group are comparatively small and they will be fully dealt with later. The second group requires by far the larger number of reserve officers and their supply necessitates consideration. It is obviously more advantageous to the country if calls on these reserves are made as requirements become apparent. In other words the supply must be divided into series. As soon as it is evident that reserves will be required, the 1st Series must be called out and the second Series warned to hold themselves in readiness. Thus the 1st Series is the most important for it must be possible to lay hands on them without fail. There must be no delay in obtaining their services. Therefore the State should look to itself to ensure their immediate provision and this can be the more certain if they are obtained from its own servants: that is to say from its various civil services. I do not propose to enter into a discussion as to merits or demerits of such action as affecting the services themselves. That is a matter for the State to decide. I propose to show that given a full establishment in the various services a surplus exists under certain circumstances.

But first what are the requirements of Cavalry, Infantry and S & T Corps for the first Series? Two officers per regiment and 25 for the S & T Corps would bring the total requirements to roughly 400 officers for this first Series. If half the Indian Army proceeded on Service these numbers would give four officers per regiment or 30 % of the strength of a regiment in officers.

SOURCES OF SUPPLY.—In examining the first group, consisting of Artillery, I. M. S., Sappers and Miners and the Army Pay Department we find that each requires specific technical training.

Recruiting of Artillery, I. M. S., Sappers and Miners, & Army Pay Dept.

The Artillery is an arm requiring a training too prolonged for civilians to afford the necessary spare time in India. Their Reserve of Officers might be selected from among N. C. Os. of British Mountain Batteries on the out-

break of War. These are to hand ready trained, and it only remains to ensure that they possess the language qualification.

Likewise the I. M. S. can recruit from among their own ranks, that is to say from among those who have passed through their ranks into civil appointments. A further supply might be obtained from among civil practitioners but these are comparatively few in this country. This should ensure an adequate supply for the early phases of the war; in the meanwhile time will be available for a further supply from Home and for their instruction in the language.

The Sappers and Miners would look to the R. E. for their earliest reserves, and a further supply should be available from among civil engineers who have offered themselves for commissions in the Reserve and who should have undergone training with Sappers and Miners in accordance with the terms of their military employment.

Finally we come to the Army Pay Department who should look for assistance to the large number of Banking Institutions throughout the country. They are a department whose needs are apt to be over-looked when attention must be centred on the fighting machine. But this department could afford regimental depots much assistance by increasing their establishment during war and detailing some of their increased strength to help the young officers in command of depots in their regimental accounts. Men with bankers' training would soon pick up this new role.

In the second group we have the Cavalry, Infantry (a few of whom consist of Pioneers), and the S & T Corps.

On the assumption that about 400 officers **Recruiting of Cavalry, Infantry & S & T Corps.** would meet the requirements of the first series and that these should be made available from among the State Services it remains to ascertain if this is possible.

If civil appointments are to remain filled whilst a fixed proportion are allowed on furlough it stands to reason

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that the number on furlough represent a surplus. It is unknown to the writer what percentage this bears to the number of appointments but one must work on some reasonable basis. It is generally accepted that the climate and strenuous work of the present day require that roughly one year in every five be taken on furlough, if health is to be maintained over a lengthy period of service. If this percentage is to be maintained then the surplus would be 25 % of the total number of appointments, or 20 % of the total number of those on the active list. The various State Services in India, excluding any of the Military ones, possess well over 2000 members. On the above basis of a 20 % surplus representing those on furlough we arrive at a total over 400. On the outbreak of war all these would be recalled and represent a surplus in those Services. Why should not this surplus be utilised by the State in its own interests. Thus 20 % of the junior ranks would become available for military duties. This does not of necessity mean that they would have to proceed on service as their arrival would release regimental officers for re-inforcements if required. They may remain at depots where much useful work can be done. Under the circumstances they must loyally accede to the needs of the State. It is for the State to reap the advantages of their system and this can only be done if the surplus percentage of the non-military Government Servants are trained to war. Objections might be raised by the Services concerned, but quiet consideration will show that the arrangement would be advantageous to them as a whole as it would tend to eliminate candidates who place reliance in the system of examinations whereby literary attainments may obscure physical defects.

Further supplies for the subsequent series must be from non-government professions and enterprises. It is impossible to foretell the total number of Reserve Officers which may be required, but the supply is limited and it is more a matter of minimum than of maximum requirements.

We have noted the sources of supply. It remains to discuss the means by which these may be obtained. They are two, Voluntary and Compulsory.

VOLUNTARY SERVICE.—Every profession seeking recruits on a voluntary basis must either appeal to the pocket or touch some chord in human nature which kindles a response by other means. In the present war patriotism, the instinct of self-preservation, and other factors have all aided in bringing in recruits. But these cannot always be depended on. Patriotism is a characteristic of the British Nation which comes to the surface in times of national stress and danger only. In the piping times of peace it is not considered necessary to continually harp on patriotism, for undoubtedly a suspicion would arise that it was being exploited to save the State expenditure at the expense of the individual.

An appeal to the military instinct lying dormant in so many might be made tentatively pending the final solution of Voluntary Service *versus* Universal; but the State must also be prepared to deal liberally with those who voluntarily offer themselves as candidates for the Indian Army Reserve of Officers. To this end we might take advantage of the present war. There are two ways in which this may be carried out on the conclusion of peace, one recruiting by Regiments and the other by the State. Every Regiment has had attached to it a certain number of Reserve Officers who, after the war, may be glad to continue their connection. The State would make arrangements for further recruiting through the civil authorities and by the issue of pamphlets which should be readily obtainable everywhere and be always before the public.

What should be the inducements offered. Here we come to the crux of the whole question. These inducements must possess some solid advantages. To imagine that candidates will offer themselves from a sense of duty, altruism, the splendour of a uniform or the glamour of arms is to court failure in the infancy of the scheme.

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To meet this end we must consider what the terms of service might be. The following are suggested.

TERMS OF SERVICE.—It is advisable to first enumerate the headings under which the terms of service may be considered. These are:—

- (a) Age limits.
- (b) Uniform.
- (c) Pay and Allowances.
- (d) Allowances other than those in (c)
- (e) Family Pension Fund.
- (f) Deferred Pay and Insurance.
- (g) Promotion.
- (j) I. A. R. Os. and Volunteers.
- (k) Arrangements with Firms.
- (l) Pensions.
- (m) Language.

Now to consider each of these points in detail. It has already

Age limits. been stated that the ages of some of the existing Reserve Officers are too high for

the work for which they are intended. At the same time, since it is proposed to take advantage of the existing supply and to grant certain conditions for promotions it would not be advisable in the commencement of the scheme to unduly restrict this. Suitable limits might therefore be that candidates must be between the ages of 20 and 32 on date of application for the Reserve and that their service terminates on completing 38 years of age.

Uniform. Then as regards their uniform there would certainly be greater esprit de corps if they were permitted to wear the uniform of the regiment to which they are attached, with the letters I. A. R. O. as an addition to the regimental numerals. Certainly they should keep up their full equipment and khaki uniform, and it is a matter for consideration whether they should not be permitted to wear the full dress and mess dress. In any case an outfit allowance to fully meet their expenditure should be given and an annual allowance for replacements.

Pay and Allowances will form a bone of contention and vary according to the arm and service to which they are attached ; roughly they may be divided into two periods, *viz*; (a) during Training and War, and (b) when not under Military Law.

To take the first case, that during Training and War. It is suggested that Reserve officers should be paid during training as during war, and that it should be in accordance with the military appointment held as paid to officers of the Regular Forces in some consolidated form, but it should not deprive officers of the Regulars of any emoluments. For instance a Reserve Officer's pay should not deprive a Regimental officer of his squadron command or double company command allowance, or a departmental officer of any special departmental allowance.

In the second case, that is to say when these Reserve Officers are not under military law, there is naturally no necessity for any pay, but as they should keep up chargers to meet an emergency call they might receive horse allowance of say Rs. 30 per mensem for the cavalry and Rs. 25 for others.

Then there are many and various other allowances, such as travelling allowances, etc. These **Other Allowances** should hold good for Reserve Officers as for Officers in the Regular Forces.

A large number of possible candidates are married, or expect that they may be so at some future date. **Family Pension Fund.** These would doubtless be glad to feel that some provisions existed should they die leaving their widows in indifferent financial circumstances. For this purpose they should be permitted to join a Family Pension Fund. Naturally the terms on which they join should be on lines recommended by a recognized actuary.

There are other methods which may be employed in place of a Family Pension Fund to provide for the **Deferred Pay and Insurances.** widow of a deceased Reserve Officer, or they may be resorted to in order to make some provision for the officer himself after he has completed his

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service in the Reserve and in recognition thereof. One is by subscribing to a Provident Fund to which the State would subscribe a proportionate amount; the other is by the State offering to pay to one of a selected number of Insurance Companies the annual cost of a Life Policy on a Reserve Officer's life up to a fixed maximum annual amount in each case, the terms of the policy being left to the officer concerned.

There is no doubt that many of the present officers in the I. A. R. O. who have reached a certain age consider that some provision should be made to grant them promotion.

Unfortunately a number base their contention on the mere question of age, totally forgetting that officers of the Regulars receive their promotion after years of labour and the passing of examinations to ensure full professional knowledge. These self same men would however regard with the strongest disapproval the appointment of anyone to a more senior position than themselves in their own civil vocations who flaunted "anno domini" as a qualification. Nevertheless there is something in their request and this could be met adequately by some simple regulations. For example, an I. A. R. O. might be appointed a captain provided he is 30 years of age or has 9 years service and provided he passes an examination which need not be as stiff as for officers of the Regulars, but it should be one which should ensure that those who pass possess a reasonable knowledge of their military work. Exceptions to this examination might be made for those who are specially recommended for promotion for good service during war, provided he is otherwise qualified by age or length of service. This would enable those to receive recognition of their work who have joined the I. A. R. O. during the present war.

The I. A. R. O. and the Volunteer Force.

It would appear on first sight that the Indian Army Reserve of Officers could have no bearing on the Volunteer Force. But it is possible that a consideration of a suggestion herein put forward might be beneficial to both forces. It would provide for further promotion to Reserve Officers and improve the

efficiency of the Volunteer Force. This suggestion is that Volunteer Corps must obtain their Field Officers from the I. A. R. O. with the sole exception that neither the State nor the Corps can fill the vacancy from that Reserve. It would ensure that the senior officers of Volunteer Corps knew their work and were not merely figure heads and it would at the same time provide an outlet for those in the I. A. R. O. for their further energies after their service in that Reserve is completed. But members of the I. A. R. O. must not be permitted to be in the Volunteers unless holding a commission therein, when they will be shown as "seconded". Only one point remains to be legislated for and that is for an officer of the I. A. R. O. who wishes to accept field rank in a Volunteer Corps before completing his full time in the Reserve.

Is it possible to come to any agreement with the civil employers of members of the I. A. R. O.,
Arrangements with Firms. There will be many firms who can ill

spare their members for the annual trainings. Others are so far situated from regular troops that an added difficulty arises. The only solution under a purely voluntary system appears to be to let those concerned make each his own private arrangement with his employers. Where inducements are sufficient to attract candidates sufficiently strongly we may rest assured that they will do their best to attain their object. Some kind of moral pressure may at times be brought to bear by the State on firms who refuse to interest themselves in this matter. Some form of economic pressure might be applied with success.

It is obvious that candidates must possess the necessary language qualification either on joining or within a reasonable period.

TRAINING.—At first sight it would appear as if Training had no connection with the provision of a reserve but more mature consideration clearly assigns prominent importance to well arranged plans for the annual trainings of these officers. Many of them reside long distances from the stations of

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regulars. The season, period of time and place must all be carefully planned. For example, for those residing at a considerable distance from troops it might be possible to hold a school of instruction near their residential districts every second year. At some stations officers could be asked annually to state the most convenient dates. In this manner much friction might be avoided.

SELECTION OF CANDIDATES.—There is no doubt that candidates should be carefully selected for the arms of the service for which they are most fitted. A candidate might be permitted to submit his name for any particular arm he fancies, but he should understand that it rests with the military authorities to finally post him as they consider is most advisable in the public interest. The candidate's civil profession should also aid in this selection. Take for instance the infantry; Pioneer battalions should have appointed to them men with some training as engineers.

COMPULSORY SERVICE.—Compulsory Service would undoubtedly afford greater facilities for obtaining a solution of this problem of officers to form a reserve for the Indian Army. The burden would be apportioned more equally. But until the State has decided to adopt universal service it is needless to discuss the lines on which a reserve might be operated.

AN IMPROVISED DRILL FOR BRIGADED MACHINE GUNS.

By

CAPTAIN F. A. G. ROUGHTON, 113th INFANTRY.

In the absence of any regulations on the subject, the following scheme was worked out for the machine guns of a brigade in Mesopotamia, in order to bring brigaded machine guns into action rapidly and without confusion. It was found to work well in practice, but was not tested in action, as no occasion arose. It is thought it might perhaps contain suggestions which would be of use, as it is evident that some such arrangement is necessary when working with brigaded machine guns. The following are the instructions which were issued to the regimental machine gun officers of the brigade, and a few remarks are added in explanation.

Method of bringing into action and fighting brigaded Machine Guns.

1. On receiving instructions to bring the guns into action, the Brigade Machine Gun Officer will point out the firing point to the Section Officers, and ride forward and reconnoitre the position.
2. The Section Officers will indicate the line of advance to their sections, order the advance, and then ride forward to the Brigade Officer.
3. The Brigade Range Takers will join the Brigade Officer as quickly as possible.
4. When the Section Officers arrive at the position, the Brigade Officer will point out the target, indicate its lateral extremities, and if possible any well defined landmarks which may be useful as fire direction points. He will give the initial range, the description of fire to be used, and roughly point out the gun positions.
5. The Section Officers will then return to their sections, bring up their guns to the firing point, and prepare to open fire. They will roughly divide the target into sections for themselves.

6. Fire will be opened on the command of the Brigade Officer.

NOTE.—The Brigade Range Takers will always be taken from the left section as the Brigade falls in.

Method of Fire.

In order to prevent any possibility of confusion, the following words of command will be used to indicate the various methods of fire.

1. "Concentrated Fire". This means that the fire of every gun in the brigade is to be directed at the point ordered.

2. "Traversing Fire". This means that each gun is to fire along the whole length of the target. In each gun section the left hand gun will fire from left to right, and the right hand gun from right to left.

3. "By Sections, Concentrate". This means that the guns of each section are to fire at the centre point of their own section of target.

4. "By Sections, Traversing Fire". This means that the guns in each section are to traverse along their own section of the target, the left hand gun from left to right, and the right hand gun from right to left.

A word of command would be as follows:— "At 1200; infantry in fours near Tree (previously indicated fire direction point) Concentrated Fire".

NOTES.—1. If it is decided to use ranging fire, it will be carried out by one section which will be named by the Brigade Officer.

2. All orders will be passed from section to section by the Section Officers. A non-commissioned officer will be told off by each section to watch the brigade officer for orders, or the section on the flank from which orders come, if the brigade officer is not visible or out of hearing.

Remarks.

(1) It is supposed that the brigade officer has been shown the target and, roughly, the fire position. He then

would rejoin his command, who would presumably be under cover and unable to see the target. He would then indicate the firing point to his section officers, and would arrive there a short time before they did.

(2) The section officers must get sufficiently in advance of their sections to enable them to receive their instructions from the brigade officer, and rejoin their sections before the latter are too near the firing point. Otherwise confusion results.

(3) There were no brigade range takers, hence the note after para 5 of the instructions. It was not possible to tell off the range takers of one section permanently, as it was not likely that all the guns of the brigade would be used together, and the selected range takers might be with their regiments.

(4) The Brigade Officer would not point out the actual position for each gun, but only the lateral extent of each section.

The initial range would be that found by range finders or other means, and the section officers would apply any corrections that their knowledge of the peculiarities of their own guns would suggest. The brigade officer would only alter the range if the initial range proved obviously wrong. Individual guns must be corrected by the section officers. It is sufficiently difficult for anyone immediately behind a gun to pick out its fire when several other guns are firing, and almost impossible for an observer on the flank to do so, which would be the normal position of the brigade officer. Moreover, all orders were passed down from section to section by shouting, and considerable practice is required to do this properly. When the guns were brigaded, there was no certainty that there would be more than a few days for practice, and therefore simplicity was a most important consideration. The best way to secure this was to leave as much as possible to the section officers. When it was necessary for the brigade officer to correct for all the guns, he did so by ordering

"Increase" (or "Decrease") the required amount. For instance, if he had given an original range of 1200, he would order "Increase 100", and not say "1300". It did not follow that, because an initial range of 1200 was ordered, this range would be on the sights of each gun, and so mistakes might arise by giving a range when correcting.

(5) The method of allowing the section officers to divide up the target for themselves appeared to work well. In most targets of any lateral extent points can be picked up to assist in this, and if the section officers are careful to make a liberal estimate of their share of the target, the worst that could happen would be for the fire to overlap, which would not much matter. The time at the disposal of the brigade officer for issuing his instructions to the section officers was very short, and the less he had to tell them the better.

(6) The explanations following the words of command mentioned under the heading, "Methods of Fire" were not intended as definitions of the various methods of fire. They were merely to ensure that a given command produced a particular result.

(8) In order to obviate the difficulty of passing orders by word of mouth when the guns were firing, it was suggested that signals might be used instead. For example each method of fire might be represented by a letter of the Semaphore alphabet, and increase or decrease of range by dashes of the Morse code, each dash representing 25 yards, using a blue flag for increase and white for decrease. It was however thought that a great deal of practice would be necessary before these signals could be picked up with the instinctive rapidity required, and they were not tried. Machine guns take up very little room, and sections can as rule be quite close to each other, so the voice does not have to carry very far.

(9) The non-commissioned officer told off to watch for orders was usually the sergeant or havildar of the section. He did not have to actually pass orders. His duty was to watch the brigade officer or section officer on his flank, and

when he saw orders coming down, to call the attention of his own section officer. By this arrangement the section officer could keep his attention fixed on his guns, which he could not have done properly if he had to be continually on the look out for orders. The orders were actually passed by the section officers.

It is not pretended that the above scheme is any way complete, and if machine guns were regularly brigaded in peace time, it could be greatly elaborated and improved. Actually it was evolved in a few hours, when orders were received for the guns to be brigaded, and must therefore be regarded as a makeshift designed to produce a passable result in the shortest possible time. Presumably in every brigade some such a scheme is produced when required, and there are probably as many methods of fighting brigade machine guns as there are brigade machine gun officers. It would be very advantageous if a drill could be issued for brigaded machine guns.

TRANSLATIONS FROM RUSSIAN NEWSPAPERS.

"*Novoe Vremya*".

24th November 1915.

Distribution of German forces.

From the Paris correspondent of the paper, the heavy losses sustained by the Germans at the time of their unsuccessful fighting in Champagne and Artois, and also the transfer of some divisions from the Eastern to the Western front, have necessitated a re-arrangement of the German troops.

At the present time, from right flank to left, there are the following armies on the Western front. In Western Flanders, from the sea coast to the Ypres Canal, there is the *IV Army* of the Duke of Wurtemberg, with Headquarters at Thielt. The *VI Army* of the Crown Prince Rupert of Bavaria, with Headquarters at Lille, occupies the district of Artois to Manche (?), 11 kilometres south of Arras. From Manche (?) to the river Havre in the Rouen district is held by the *II Army* of General Von Bulow. The *I Army* of General Von Fabek holds a position from the Havre to the canal between the Oise and the Aisne. The *VII Army* of General Von Giringen is extended from the canal to a point 11 kilometres North-East of Rheims. The *III Army* of General Von Einem operates in Compiegne up to Massiges.

In Argonne and South Wavre, from Massiges to Etien, 20 kilometres East of Verdun, the Crown Prince William of Prussia's *V Army* with Headquarters at Stenet holds the position. From Eastern Wavre to the valley of the Moselle detachments of General Von Strantz's Army are in position. In Lorraine from the Moselle to St. Marie aux Mines is General von Falkenhhausen's Army. In Alsace from the St. Marie mines to the Swiss frontier is the German Army of General von Gede (?).

The Crown Prince of Bavaria, with 20 Divisions not counting strong reserves, has the largest force. The weakest army is that of General Bulow, who has only eight Divisions in all at his disposal.

The general total of the German forces on the Western front comes to 113 Infantry Divisions and two Cavalry Divisions, which gives some 2,300,000 men. Recently one Division

"*Noboye Vremya.*"

24th November 1915.

was sent to the Eastern front and one to Serbia. At the same time ten Divisions were sent from the East to the West front. Thus the German strength on the West was increased by eight Divisions.

14th December 1915.

Anglo-Turkish Theatres of War.

These are strong signs that the Germans now intend to transfer the centre of gravity of their operations from the Balkans to the Dardanelles, Egypt and Mesopotamia, where up to date operations have only been of a secondary importance.

One of the most noticeable signs is the increased attention paid by Germany to the development of Turkish railway systems in Asia-Minor, coupled with their desperate intriguing in Persia. There are also strong and persistent rumours that great preparations are on foot for a determined attack on Egypt.

The British will probably not defend the actual line of the Canal but will move forward, perhaps into Syria, or to Alexandretta, with the idea of interrupting the railway to Egypt, which at this point passes not far from the shores of the Mediterranean.

In Mesopotamia, owing to the continued arrival of fresh Turkish reinforcements, General Townshend has been compelled to abandon his victorious advance on Baghdad, and to retire on the strongly entrenched position of Kut-el-Amara. There is no doubt that as soon as sufficient reinforcements arrive from India, the British will continue their victorious advance on Baghdad.

"*Reich*"

23rd November 1915.

The German Movement on Constantinople.

The aims of the German movement towards Constantinople are now more or less clear to everyone. Germany is first and foremost interested in establishing direct communication with Turkey, in order to infuse fresh energy into her ally, who has shown signs of weakening before the concerted attack of the Triple Entente. In cutting for herself a passage to Constantinople, Germany reckons at the same time to turn the mutual relations of the Balkan States

“Rech.”

23rd November 1915.

to her own advantage and to occupy important “points d’appui” in the Balkans. But there is no doubt that the Balkan plans of the Emperor William go beyond the limits of these two immediate problems. The Emperor William is obviously governed by his understanding of the present war, as being a struggle for world power and for the markets of the world. Even last summer, while the Duke of Mecklenburg was negotiating with Tsar Ferdinand in Bulgaria, German Diplomats said openly that Sofia and Constantinople would be merely stages for the Central European Powers on the road to the Suez Canal and the frontiers of Egypt. Mackensen’s army is now called by the Germans, “The Army of Egypt”. Notwithstanding the warnings of sceptics, who insist that the “chief front”, where every soldier has to be reckoned, should not be weakened for a “front of secondary importance”, our gallant allies, (i.e. Britain and France) have organised their Balkan expedition on a broad basis. The article then regrets that up to the present Italy has abstained from active intervention in the Balkans. This attitude of Italy has of course been interpreted by our enemies in a sense disadvantageous to the unity of the Allies, more especially as Italy has not yet signed the declaration of the 23rd of August, regarding a separate peace. For this reason the expected action of Italy in Albania is anticipated with the keenest pleasure, as it would probably entail a declaration of war between Italy and Germany, and the consequent adhesion of Italy to the Allies declaration.

QUARTERLY SUMMARY OF MILITARY NEWS AND ITEMS OF INTEREST.

ADJUTANT GENERAL'S BRANCH.

691. Bands and Messes.—It is notified for information that the

I. A. O., Government of India have sanctioned the grant
18th December 1915. of the following mess allowances in addition
Army Department to those specified in paragraph 284, Army
letter No. H. 9079, Regulations, India, Volume I:—
dated 13th November 1915.

(a) British Cavalry and British Infantry Regiments.

For each officer of the Indian Army Reserve present—Rs. 10 per mensem.

(b) Depots of British Cavalry and Infantry Regiments on service.—

For each officer present in excess of two—Rs. 10 per mensem.

(c) Indian Cavalry and Indian Infantry Regiments in India:—

For each officer present in excess of 15 (including the medical officer)—Rs. 10 per mensem, subject to a maximum of Rs. 150 per mensem.

(d) Depots of Indian Cavalry, Sappers and Miners and Indian Infantry Regiments on Service.—

For each officer present in excess of two—Rs. 10 per mensem.

2. These allowances will be admissible with effect from the 4th August 1914, and for the duration of the war.

92. Dress.—It is notified for information that, during the

I. A. O. period of the present war, cavalry pattern
14th February 1916. swords and scabbards will be provided for
Army Department officers of the Indian Army Reserve attached
letter No. H.S. 364, dated 20th January 1916 to mounted units, on indent from the nearest

arsenal, on the understanding that when the officers cease to be attached to such units or when the correct pattern swords become available, the cavalry pattern swords and scabbards will be returned to arsenals.

2. The provision of swords by officers of the Indian Army Reserve attached to dismounted units is optional.

14. Indemnification for loss of kit.—The attention of all con-

I. A. O. concerned is invited to Army Order 323 of 1915
3rd January 1916 and paragraph 546, Allowance Regulations.

2. The provisions of that Army Order affecting claims for compensation in respect of kit lost by invalided officers of the British service have been adopted to govern similar claims by British Officers of the Indian Army, who have been invalided to the United Kingdom or elsewhere. The provisions in question have been embodied in the instructions and notes of a form of Claim, issued by the India Office. A copy of the form is published as an annexure to this order.

673. Pay and Allowances.—It is notified for information that

I. A. O. the revised rates of pay for majors of British Infantry on promotion, promulgated in India
6th December 1915. Army Order No. 13, dated the 11th January 1915, do not include horse allowance, which is accordingly admissible for one charger, as **Army Department** a separate item, with effect from the 1st January 1914, the date **No. 27721-1 (A. G-1),** from which the revised rates of pay had effect. **dated 13th November 1915.**

689. Pay and Allowances.—It is notified for information that with reference to India Army Orders Nos. 75 and 273 of 1915, sick or wounded officers are entitled, for three months, to the full pay they were drawing before being struck off duty. If an officer was holding an officiating or field appointment at the time of being struck off duty, the pay of such appointment is admissible for three months.



REVIEWS OF BOOKS.

The Times History of the War.

Parts 60-75.

Chapter XC describes the political situation in England before the outbreak of war and goes on to relate events leading up to the formation of the Coalition Government and the Ministry of Munitions. The appalling situation, which had arisen as a result of the policy of the Government with regard to Ulster, is dismissed in a few lines, while considerable space is devoted to labour troubles since the war. As a record of contemporary events it will throw very little light on either of these for the future historian.

The intense relief with which the country heard of the ultimatum to Germany on the 4th August, deserves mention in a chapter dealing with the impressions of the time, also the general ignorance of all that it involved, which was shown by the well meaning but futile suggestions in the columns of the Times in August 1914.

Chapter XCI deals with the counter offensive in Galicia, combined with the second invasion of Poland and the fall of Warsaw. The writer holds the opinion that the latter was more or less inevitable and attributes it, only to a minor extent, to lack of ammunition and heavy artillery by the Russians. With the knowledge available it seems premature to try and arrive at the truth yet.

The map does not cover the whole area described and does not show many of the places mentioned, which makes it difficult for the reader to follow the operations. The illustration on page 329 of the hasty demolition of a bridge is more suggestive of festive decorations.

Chapter XCII deals with the Dardanelles Campaign up to the last Naval bombardment. A short diary of the whole operation up to October 1915, is followed by an enquiry into the inception of the operation. Mr. Churchill's responsibility is discussed at some length and the conclusion is reached that it was no greater than that of the rest of the Cabinet, but that as the enterprise appealed to his imagination he exercised most influence on its execution.

It is stated that the naval operations could not wait for the military, because some diversion was essential to relieve the pressure on the Russians in the Caucasus, also that the military operations were delayed

for want of the necessary ammunition. It is seriously stated that one factor in the decision to force the Dardanelles, was that we had certain ships available, which were powerful but not fast enough for the battle fleets, and a large force in Egypt, and both were looking out for a 'job of work'.

Finally, we are told that the decision was not the result of a definite plan but the outcome of many contributory influences. If this was actually the case, we need not be astonished at its failure, but as if this was not sufficient, it is stated that the elaborate plans of the General Staff for this enterprise were ignored in the actual execution. Was not the disastrous opening of the South African War due to the same cause?

A short sketch of previous operations is given and a description of the land on both sides of the Hellespont. A clear layered map is included, but it does not mark all the places mentioned.

The naval bombardment is described in some detail and furnishes proof if it were needed, that ships cannot destroy shore batteries unless they have an overwhelming superiority of guns. A short account of Sir Ian Hamilton's career and the circumstances in which he took command, and of the sinking of the Bouvet, the Inflexible and the Ocean, conclude an interesting number.

Chapter XCIII describes the organisation of the Ministry of Munitions in England and the difficulties with Trades Unions and the shortage of skilled labour that had to be met.

The manufacture of ammunition in France, Russia, Canada and Australia is touched on, and India is disposed of in 4 lines.

The process of making shells, and cartridge cases is described and the composition of the propellants and high explosives used by our Army. This can be found in any treatise on the subject and seems out of place in a contemporary record of the war.

Chapter XCIV continues the description of the Dardanelles Campaign with the account of the landing. The heroic efforts of the different landing parties are graphically described. The names of the regiments of the splendid 29th Division are mentioned, but we are disappointed not to find the names of the Indian Regiments present. A short sketch of General Birdwood's career is given, which will interest Indian readers. A large scale map to illustrate the operations would have made the chapter far more easy to follow.

The writer considers the great fault was, that the attacking forces were too dispersed, and that too many landings were attempted and some without sufficient force. It seems from the map however that the number of landings and the front attacked had to be fixed by the lie of the ground and were not open to much selection ; but two questions occur to the reader from this chapter. Why were the unopposed landings at S and Y beaches not immediately supported in strength, and why was no simultaneous landing made at Suvla Bay ? From this account it seems that out of some 120,000 troops available, only some 25,000 were used to force the landing.

Chapter XCV, which completes Vol. V, describes the operations on the Eastern Front after the fall of Warsaw and follows on Chapter XCI. The writer considers that the German and Austrian object was to drive the Russian line back so far as to seize the railway between Vilna and Rovno, so that the Northern and Southern armies would be separated by the Pripet Marshes, a region 180 miles wide with no other lateral communication. With a battle line 850 miles long it is doubtful if such an indecisive objective can have been the aim of these operations. At any rate a large part of this railway, has now been captured but nothing decisive has resulted. The Russian line being shortened by some 200 miles is probably stronger than when it curved round Warsaw. The German strategy seems to have been to press forward everywhere to discover any weak places and push in where ever they might be found. Little else seems possible in the circumstances.

An excellent layered map accompanies the chapter which shows nearly all the places mentioned. In a contemporary record it seems premature to try and fathom the intentions of commanders ; they are not likely to be known until long afterwards.

Chapter XCVI describes the series of continuous minor operations all along the front held by the French in the Western Theatre from Nov. 1914—April 1915. There is a clear map to illustrate them, but it is on much too small a scale to enable the reader to follow these tactical conflicts, moreover they do not lend themselves to brief description which to be of any value must be in detail.

Chapter XCVII is headed Science and the Health of Armies, and

describes the various scientific discoveries for dealing with the various scourges which in former wars have proved far more destructive of human life than the arms of the enemy. The Chapter is of great interest and justly holds up to admiration the invaluable services of men like Sir Almroth Wright and Sir W. Leishman. Some figures comparing the deaths from disease and those from the weapons of war in previous campaigns, with those in this war in our own army, would have added much point to the remarks. In this country which offers an inexhaustible field for sanitary science, it is obvious from the experiments described, that more systematic efforts would be amply repaid.

Chapter XCVIII describes the operations in the Gallipoli Peninsula from the 26th April till the end of June 1915. It is quite impossible to follow the narrative, in spite of its stirring character without a large scale map, which is not provided. In the map with Chapter XCII it is only possible to identify the leading features of the ground over which these operations took place. The stubborn character of the Turk when holding a position and the formidable nature of the whole enterprise are very evident.

Chapter XCIX is entitled "The Spirit of Anzac", and describes the organisation of the military forces sent by Australia and New Zealand to take their share in the Great War. It relates the spread of enthusiasm for the war from the first beginnings until the Dominions had thoroughly realised the magnitude of the task. Incidentally it reveals the want of organisation and foresight throughout the Empire, and describes how often the Colonial Governments were left in the dark when they asked for the guidance they had every right to expect, how offers had to be repeated, and how disinterestedly they responded to every hint. May the lesson not be forgotten.

Various episodes in the heroic fighting at Anzac are graphically described. The simple narrative of many of these wonderful exploits thrills the reader and raises the hope that some adequate pen will do them more justice in the future. We are perhaps apt to speak disparagingly of Colonial discipline, but the story of the torpedoing of the Southland recalls the Birkenhead and the Warren Hastings and shows that in spite of their short training, these men had attained discipline of the highest order.

Chapter C is called Railways and the War. The organisation of railways is a highly technical matter and does not lend itself to

popular treatment and when applied to the even more technical and complicated conduct of war, the attempt to produce a satisfactory account for the ordinary reader cannot be very successful. The writer mentions the use of railways in 1870 and the South African War and then briefly comments on the railway systems of the countries of Europe affected by the war.

The sketch maps are poor and do not illustrate the points mentioned adequately. They might well have been enlarged and improved and many of the other illustrations omitted.

The organisation of English railways for war purposes is described in outline and some figures of the numbers of troops trains run are given. It is stated that the secret of the despatch of the British Expeditionary Force to France was so well kept, that the first information of it that the Germans got, was when they actually found themselves opposed to it in the field. If this is true, it is a most remarkable fact.

The writer quite rightly points out the invaluable services rendered by English Railways on the outbreak of war and how they were able to handle an enormous increase in military traffic. But he does not emphasise the obvious lesson that if in this sphere of Railway Transport in war so great an expansion was possible with a small basis of preliminary peace organisation, how much could not have been done in every other branch of war organisation, which had to be improvised on the out break of war, because no basis at all existed in peace.

How many lives and how many millions might have been saved, had the nation realised the absurdity of Lord Haldane's scheme to begin training troops after the outbreak of war.

Chapter CI describes the operations of the French in the Western Front from April to September 1915, which covers the captures of Souchy and the Labyrinth, the fighting between St. Mihiel and Bois le Pretre and in Alsace.

They show the extraordinary nature of trench warfare generally, the ingenuity both of the attackers and defenders and the astonishing difficulties that have to be overcome. Incidentally they clearly show the fine spirit and unflinching determination of our Allies.

It is quite impossible to follow the operations in detail without large scale maps. Those provided are only enough to indicate generally the areas where the operations took place.

Chapter CII is devoted to Prisoners of war and compares their treatment by the Germans with that of the British and Russians. The reports of American visitors to their camps in each country are quoted at some length. It is clearly established that in Germany while at some camps the commandants did all that might reasonably be expected, though less than was done in England, still no official action was taken to prevent downright brutality, especially in the movements of prisoners from the battle field to the camps and prisons. It may be taken as certain that even if little is said on this unwelcome subject, German behaviour to prisoners will not be forgotten for generations after the war. Can one wonder that the French never forgot nor forgave 1870?

Chapter CIII describes Lord Derby's recruiting scheme and the successive steps by which the Government were induced to adopt the modified form of compulsory service now in force.

The War Office is blamed because it could not immediately organise, equip, and train some 2 million recruits, besides keeping supplied in the theatres of war far larger forces than it was ever intended to deal with.

The writer takes credit for events proving the correctness of the opinions of the Times. One is tempted to point out that those opinions have been expressed in vain by others for years and if they had been acted upon years ago the war would have been over by this time, that is, if it had ever begun at all.

The country has never been told the truth by its leaders and certainly never had any opportunity of expressing its opinion on the subject of obligatory military service.

Chapter CIV describes the great French success in Champagne in September 1915. The operations are given in considerable detail and two quite good maps are included, by which it is possible to follow what happened. The writer draws attention to the necessity for accurate large scale maps and describes the means taken to fill in details of ground in occupation by the enemy and to note changes in trenches from time to time.

Incidentally it furnishes a striking criticism of the dangerous fallacy that accurate large scale maps are unnecessary, and that troops taught to rely on maps in peace will not use their eyes in war. At what cost has topographical information to be obtained in war, which has been neglected in peace !

Chapter CV deals with the Battle of Loos and the operations from the sea to La Bassee, undertaken to divert attention from the real point of attack. These it will be remembered were simultaneous with the French advance in Champagne described in the previous chapter. The narrative is much split up with anecdotes and difficult to follow.

The writer states that the XI Corps which formed the general reserve, was not placed at the disposal of Sir Douglas Haig until after the troops in the first line had actually captured the German trenches at Haisnes. If this was a fact, it is not surprising that they were late in coming up. It is also stated that the French attack on the right was not made simultaneously and therefore the right flank of the IV Corps was left exposed at a critical moment. Without much fuller information it is premature to say why the battle was not the decisive success which seems to have been anticipated.

St. Privat—German Sources.

Translated by Harry Bell (Publishers, Staff College Press,) Fort Leavenworth, Kansas, U. S. A.

As the preface explains, this book is a collection of translations made specially for the Staff College students of the United States Army. In its four hundred and eighty odd pages, it deals with the fighting of August 18th 1870, from many points of view and with the utmost detail.

It is not however a work that would interest the general reader; but for the student, for those who have to lecture on tactics, strategy, and the writing of orders in the field or who have to work out situations for staff rides, Regimental tours, and indoor exercises on maps, this book is a mine of valuable information, situations, and sound criticism.

Of the 15 articles translated—all by well known German writers—the following are specially worthy of notice.

"The Prussian Guard on the 18th of August 1870." by Captain Arnold Helmuth. The author deals in a very complete manner with the action of the Guards' Corps, and he gives an excellent account of the work done by individual battalions and even companies. The narrative of the fighting resembles strongly the accounts received of the fighting at Mons and during the early battles of the present War.

Von der Goltz's article on "The operations of the II Army", should be studied in connection with F. S. R., Part I, Chapter II, for it gives many fine examples of operation orders, both written and verbal,

and reports by officers on reconnaissance duty. It must be remembered however that this book is based entirely on German sources, which must necessarily be one sided. This remark applies especially to the articles written before 1905. In any case the student is strongly recommended not to accept German accounts blindly, but to compare them with the French Official History before coming to a definite conclusion.

"Extracts from the 18th August, 1870", by the Great General Staff, published in 1905, is well worth close study, for it abounds in good examples of tactical situations and gives an immense amount of useful minor detail. The whole article, some 150 pages of very small type is, however, typical of German thoroughness combined with German literary dulness.

Dull, verbose, and bombastic as this book is in parts, still it is a work to read and to think about—in small quantities at a time. If it does nothing else, it will most certainly teach the reader to avoid hasty and shallow criticism of leaders who have blundered. It will bring home to him the truth of von Moltke's saying—"As a rule everything appearing absolutely improper and contradictory, disappears entirely as soon as we perceive the motive, the thousands of frictions and difficulties, which the execution encountered."

Captain Conger U. S. A. is to be congratulated on his excellent choice of articles for translation, and our thanks are most certainly due to Mrs. Conger for undertaking so great a task as that of editing and checking the translations, and compiling the foot notes and cross-references, which have added so greatly to the value of this work.

Lucknow, a Guide to,

By Major H. A. Newell Indian Army, Harrison & Sons, St. Martin's Lane, London W. C.

Major Newell has written an interesting little guide book to Lucknow which contains a great deal of clear concise information. The author has evidently made a careful study of the standard works dealing with Lucknow and the part it has played in the history of India, but it is a great pity that he has neglected to refer to them or to give sources from which his information is drawn. A statement of the works consulted at the beginning, or referenced footnotes would have added 100 per cent to the value of his book. Anyone who, with the aid

of a "motor," "does" Lucknow as suggested, and who follows exactly the itinerary laid down, may well feel that, not only has nothing been missed but also that in the minimum of time the maximum of sight-seeing has been got through.

A Syntax of Colloquial Pashtu.

Part I by Major D. L. R. Lorimer, Indian Army., (Clarendon Press), Price Rs. 13-8.

This is a book which will be welcomed by every student of Pashtu. The author has critically and systematically investigated the problems of syntax and word-usage in the Pashtu language, and he has given the results of his investigations in a book which is admirably arranged, clearly expressed, and carefully edited.

An appreciation of correct pronunciation is the first essential to the acquirement of a colloquial knowledge of any language and, in this connection, Major Lorimer's explanations of vowel sounds and his system of transliteration will be found particularly helpful.

His book is characterized throughout by a careful and scholarly treatment of his subject, but, at the same time, he has not lost sight of the practical point of view as opposed to the purely philosophical one.

Major Lorimer's book is a valuable addition to the existing works on Pashtu and students of the language will look forward with pleasure to the publication of Part II, which is in preparation.

Notes on Pashtu Grammar.

By Major A. D. Cox. 69th Punjabis (Arsby, Lockwood & Sons). Price Rs. 6.

This book does not, as the author himself states, constitute an exhaustive treatment of Pashtu grammar, but it gives, in a clear and concise form, all the essential points of grammar which are necessary for a practical acquaintance with the language.

The author's method of showing the conjugation of Pashtu verbs is marked by an avoidance of confusing and unnecessary redundancy, and it is one which should materially assist the beginner for whom it is designed.

The second half of the book is devoted to colloquial sentences and exercises set for the Higher Standard examinations in Pashto. These are given in English only and their utility seems doubtful. Some of them have already been given in Roos Keppe's material and almost any mawali can provide them.

The book is one which will be of the greatest use to any beginner or prospective candidate for the Higher Standard, Pashto.

It has been carefully compiled and is free from the irritating and misleading typographical errors which are so frequently found where Arabic type is employed.

...warning ...
India, but it is a great
service to give sources from which
the works consulted at the beginning
added 100 per cent to the value

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
1873...COLQUHOUN, Capt. J. A. S., R.A.
1874...COLQUHOUN, Capt. J. A. S., R.A.
1879...ST. JOHN, Maj. O. B. C., R.E.
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.
1882...MASON, Lieut. A. H., R.E.
1883...COLLEN, Maj. E. H. H., S.C.
1884...BARROW, Capt. E. G., 7th Bengal Infantry.
1887...YATE, Lieut. A. C., 27th Baluch Infantry.
1888...MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (especially awarded a silver medal).
1889...DUFF, Capt. B., 9th Bengal Infantry.
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.
1893...BULLOCK, Maj. G. M., Devonshire Regiment.
1894...CARTER, Capt. F. C., Northumberland Fusiliers.
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.
1898...MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (especially awarded a silver medal).
1899...NEVILLE, Col. J. P. C., S.C.
1900...THULLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E., (especially awarded a silver medal).
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R.F.G., R.E., (especially awarded a silver medal).
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908...JEUDWINE, Maj. H. S., R.A.
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (especially awarded a silver medal).
1911...Mr. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
1914...BAINBRIDGE, Lieut.-Col. W. I., D.S.O., 51st Sikhs, (F. F.)
NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
(especially awarded a silver medal).

The second half of the book is devoted to colloquial sentences and exercises set for the Higher Standard examinations in Pashtu. These are given in English only and their utility seems doubtful. Some of them have already been given in Roos Keppe's manual and almost any munshi can provide them.

The book is one which will be of the greatest use to any beginner or prospective candidate for the Higher Standard, Pashtu.

It has been carefully compiled and is free from the irritating and misleading typographical errors which are so frequently found where Arabic type is employed.

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
1873...COLQUHOUN, Capt. J. A. S., R.A.
1874...COLQUHOUN, Capt. J. A. S., R.A.
1879...ST. JOHN, Maj. O. B. C., R.E.
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.
1882...MASON, Lieut. A. H., R.E.
1883...COLLEN, Maj. E. H. H., S.C.
1884...BARROW, Capt. E. G., 7th Bengal Infantry.
1887...YATE, Lieut. A. C., 27th Baluch Infantry.
1888...MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (especially awarded a silver medal).
1889...DUFF, Capt. B., 9th Bengal Infantry.
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.
1893...BULLOCK, Maj. G. M., Devonshire Regiment.
1894...CARTER, Capt. F. C., Northumberland Fusiliers.
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.
1898...MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (especially awarded a silver medal).
1899...NEVILLE, Col. J. P. C., S.C.
1900...THULLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E., (especially awarded a silver medal).
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R.F.G., R.E., (especially awarded a silver medal).
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908...JEUDWINE, Maj. H. S., R.A.
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (especially awarded a silver medal).
1911...MR. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.).
1914...BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs, (F. F.)
NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
(especially awarded a silver medal).

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—o—

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

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(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments, such as Frontier Militia, Levies and Military Police, also all ranks serving in the Imperial Service Troops.

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(With rank of Officers at the date of the Award).

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- 1890...**YOUNGHUSBAND**, Capt. F. E. King's Dragoon Guards.
- 1891...**SAWYER**, Major H. A., 45th Sikhs.
 RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892...**VAUGHAN**, Capt. H. B., 7th Bengal Infantry.
 JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893...**BOWER**, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
 FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894...**O'SULLIVAN**, Major G. H. W., R.E.
 MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895...**DAVIES**, Capt. H. R., Oxfordshire Light Infantry.
 GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...**COCKERILL**, Lieut. G. K., 28th Punjab Infantry.
 GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...**SWYAYNE**, Capt. E. J. E., 16th Rajput Infantry.
 SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...**WALKER**, Capt. H. B., Duke of Cornwall's Light Infantry.
 ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...**DOUGLAS**, Capt. J. A., 2nd Bengal Lancers.
 MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...**WINGATE**, Capt. A. W. S., 14th Bengal Lancers.
 GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...**BURTON**, Major E. B., 17th Bengal Lancers.
 SUNDAR SINGH, Colour Havildar, 31st Burmese Infantry.
- 1902...**RAY**, Capt. M. R. E., 7th Rajput Infantry.
 TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...**MANIFOLD**, Lieut.-Colonel C. C., I.M.S.
 GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...**FRASER**, Capt. L. D., R.G.A.
 MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

MacGregor Memorial Medallists—*contd.*

- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., c.m.g., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., r.e.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.
- 1912...PRITCHARD, Capt. B.E.A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
WARATONG, Havildar, Burma Military Police (specially awarded a silver medal).
- 1914...BAILEY, Capt. F. M., i.a. (Political Dept.)
MORSHEAD, Capt. H. T., r.e.
HAIDAR ALI, Naick, 106th Hazara Pioneers.
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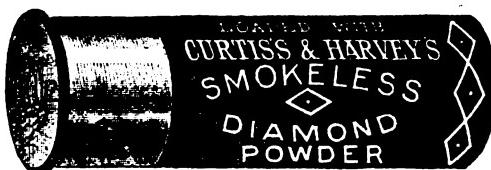
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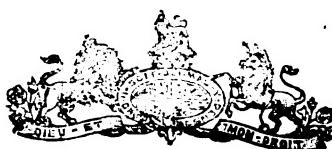
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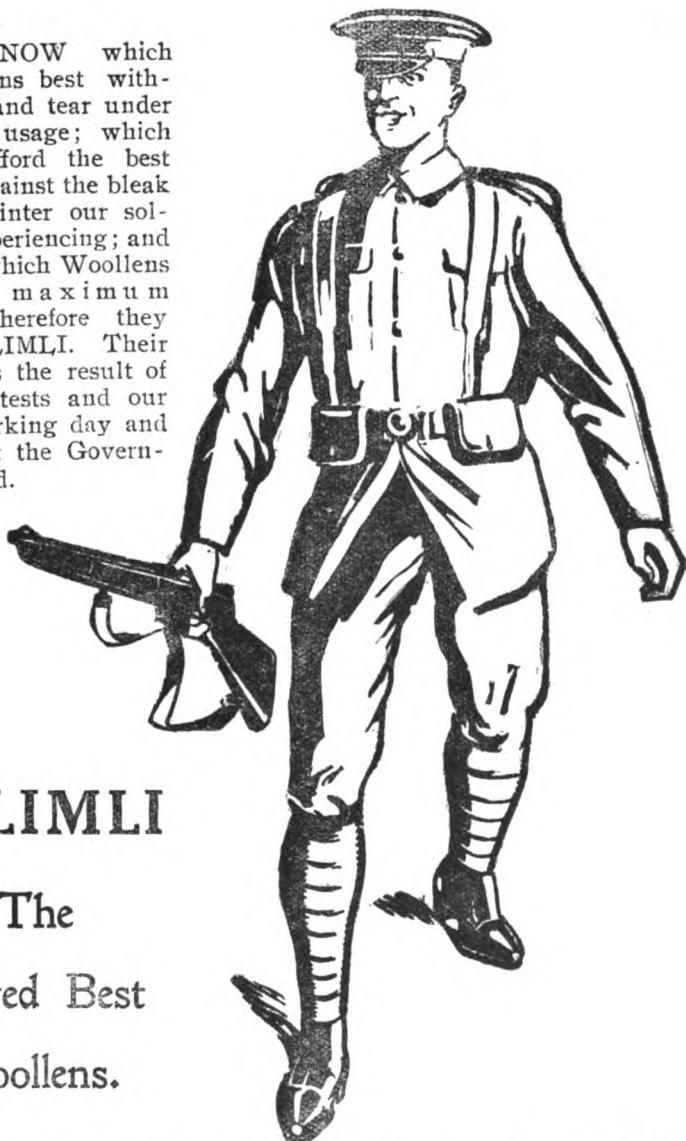
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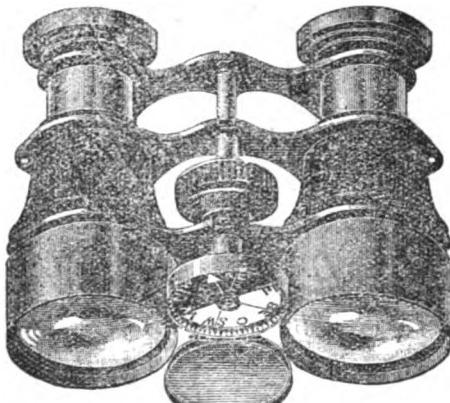
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United Service Institution of India.

GOLD MEDAL ESSAY COMPETITION 1915-16.

The Council have chosen as the subject for the Gold Medal Essay for 1916-17 the following:—

"The possibility of utilizing India as a Military Asset to the Empire more in accordance with her size and population than at present".

The following are the conditions of the competition:—

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- (3) When a reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1916.
- (6) Essays will be submitted for adjudication to Referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in August or September 1916.
- (8) All essays submitted are to become the property of the United Service Institution of India, *absolutely*, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed about 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

SIMLA,
20th June 1916.

C. C. R. MURPHY, *Lieut.-Colonel,*
Secretary, U. S. I. of India.

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United Service Institution of India.

JULY 1916.

SECRETARY'S NOTES.

I.—New Members.

The following members joined the Institution between the 16th February and the 15th June 1916 inclusive:—

LIFE MEMBERS.

Lieut. E. B. Nelson.

Lieut. C. S. Cunningham.

Capt. E. A. W. Lake.

Lieut. H. J. Ackland.

ORDINARY MEMBERS.

Lieut. J. M. Bowler.

Captain H. McWilliam.

Captain H. Coupland.

S. G. V. FitzGerald, Esqr.

Lieut. G. T. Johnson.

Major W. E. Crum.

Captain J. Matson.

Captain D. Douglas.

Major J. S. M. Harcourt.

Lieut. H. J. S. Butt-Gow.

II.—Tactical Problems.

In order to assist officers, working for Tactical examinations, the Institution has schemes for issue to members only, at Rs. 5 each, which includes criticism and a solution by a qualified officer ; 26 schemes are now available.

III.—Military History Papers.

(1) In order to assist officers in the study of military history, the Institution has sets of questions on the following campaigns.

- (a) One paper on the Waterloo Campaign.
- (b) Three papers on Callwell's Small Wars.
- (c) Two papers on the strategy of Russo-Japanese War.

Secretary's Notes.

- (d) Five papers on the battles of the Russo-Japanese War.
- (e) Two papers on the Afghan War, 1879—80.
- (f) Two papers on the Crimean War.
- (g) One paper on the Indian Mutiny.
- (h) One paper on the Shenandoah Valley Campaign, 1861-62.
- (i) One paper on the Bohemian Campaign, 1866, to the Battle of Koniggratz, inclusive.
- (j) One paper on the Jena Campaign, 1806.
- (k) One paper on the Franco-German War, 1870.

The charge for these papers is Rs. 5 each, which includes criticism by qualified officers.

(2) Pamphlets dealing with the Shenandoah Valley Campaign from April 1861 to June 1862, the Bohemian Campaign, 1866 to the battle of Koniggratz inclusive, and the Battle of Liaoyang, can be obtained from the Secretary, Price Re. 1 each, or Re. 1-2-0 per V. P. P.

IV.—Maps.

The Institution has for sale a variety of large scale maps, (2 and 4 inches to one mile), price As. 8 each.

They are specially useful for instruction in map reading, tactical schemes and in preparation for examination, and can be had either of English or Indian country.

V.—Premia for Articles in the Journal.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

VI.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 483, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Institution of India are informed that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee. Contributors

are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors are requested to have their articles either typed or printed.

VII.—Library Catalogue.

The library catalogue revised up to 1st January 1916 is now available. Price Rs. 2 or Re. 2-4-0 per V. P. P. A list of books received each quarter is published with the Journal.

VIII.—Gold Medal Prize Essay, 1915-16.

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IX.—Regimental Army Lists.

The Institution is prepared to supply members and units with manuscript, type-written or printed pages from old Army Lists since 1800. Endeavours will also be made to procure extracts from the "Registers" prior to that date. The following will be the rates charged:—

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It is regretted that our former arrangement with the press has come to an end, and we are no longer able to get the printing done as cheaply as before.

If facsimile of *type* is required the price of printed pages will range from Rs. 5-8 to Rs. 3-8 per page, according to the amount of matter on each page, the higher rate being charged for pages similar to those of the Indian Army in the current Army List.

X.—War Maps.

War Maps are on view in the Reading Room of the Institution, with the positions of the troops, so far as is known, marked with flags, in each theatre of War.

XI.—Annual Subscriptions.

The Committee again invite the attention of members to the large amount of unnecessary correspondence and expense annually caused to the Institution by the difficulty in getting in the annual subscriptions.

If members wish to resign their membership they have only to notify the fact in writing to the Secretary. If this is not done, it is presumed that they wish to remain members and the Journal is regularly posted to their last known address.

Much inconvenience and unnecessary correspondence is also caused by the failure of members to notify their changes of address or to make any arrangements for the Journal to be sent after them, when they change their address.

The remedy for both these matters lies with members themselves, and it is for their consideration whether they agree to continue supplying the Journal to those who have not paid their subscriptions, and to have the time of their staff largely taken up in issuing reminders and trying to trace addresses.

XII.—Accounts 1915.

It will be seen that Rs. 4,500 had to be withdrawn from Fixed Deposit bearing interest at 4 p. c. in order to meet the current expenditure of the Institution. This would have been unnecessary if all members had paid their annual subscriptions.

XIII.—Missing Journals.

The set of Journals of the U. S. I. of India in our library is deficient of Volume XII for the year 1883; also the copy of Volume I, for the years 1871-72, which we have is incomplete. The Committee would be glad if anyone in possession of the above copies will kindly communicate with the Secretary.

Books received.

Publishers:—GALE & POLDEN, LTD., LONDON & ALDERSHOT.

“The Soldier’s Night Guide for Egypt, Arabia and India”, by “Pathfinder” (Price 3 pence).

“Notes for Lectures on Map Reading and Sketching”, by Courtney Terrell, Inns of Court O. T. C. (Price 1 net.)

Notices of Books.

“Straight Tips for ‘Subs’” by Captain A. H. Trapmann, (Price 6 pence)—Messrs. Foster Groom & Co. Ltd., 15, Charing Cross, London, S. W.

A collection of hints which will no doubt be found useful by many gentlemen getting commissions during this war.

“Local History of Poona and its Battlefields” by Colonel L. W. Shakespear (Price Rs. 5)—Messrs. MacMillan & Co. Ltd.

Secretary's Notes.

We have read this little book with great pleasure. It is a brief historical sketch of Poona and its neighbourhood which will surely prove of more than purely local interest.

DIARY OF THE WAR.

From 1st February 1916 to 30th April 1916.

For Diary of the War regarding events from 28th June 1914 to 31st January 1916, see the numbers of the 1915 and 1916 Journals.

February 1st.—Early this morning the news that English counties were last night visited by six or seven German airships was made public by the War Offices. Although bombs were dropped the damage done is at present believed to be inconsiderable.

Another Zeppelin attacked Paris on Sunday night, and dropped bombs without doing any damage or causing any injuries.

Our men broke into the German trenches on Sunday night, found them full of Germans, inflicted about 40 casualties, and returned with three prisoners and two machine-guns.

Two German destroyers grounded on Sunday morning between the Kattegat and the Baltic, near the spot where the British submarine E13 was lost. They were got off by the help of other German warships within the 24 hours limit.

February 2nd.—The Zeppelin raid on Monday night was on a large scale. The raiders, after they had crossed the coastline, seem to have steered various courses and penetrated some way inland.

About 220 bombs were dropped in six counties—Norfolk, Suffolk, Lincolnshire, Leicestershire, Staffordshire, and Derbyshire. The theory of the authorities is that the raiders were hampered by the thick mist. Except in one part of Staffordshire, no very considerable material damage was done.

Nowhere was there any military damage.

The Germans are enthusiastic about the results of the raid, claiming that they have bombed the shipping and docks of

Liverpool and Birkenhead, the industrial works of Sheffield, &c., and that the results of the attacks were manifest in explosions and fires.

Another report from General Sir Horace Smith-Dorrien, commanding in East Africa, was issued yesterday. Good progress is being made with the branch railway from Voi. It has now been pushed on to the site of an enemy camp west of Mbuyuni which was captured by our troops on January 24th.

February 3rd.—Another official notice issued last night shows that 59 were killed and 101 injured. The number of bombs dropped, known at present, exceeds 300. Many fell in rural places and caused no damage.

The latest information from General Aylmer, commanding the relief expedition in Mesopotamia, is that he holds a strong position on the Tigris. The recent floods make it impossible for him to move forward at present.

All is well with General Townshend at Kut. He is in daily communication by wireless with the relief force. On his north-west front the enemy have fallen back some 2,000 yards.

The latest news from Cameroon shows that German territory is practically cleared of the enemy, but that he has retreated into Spanish Guinea, that is to say, over the south-western border of the German Colony.

February 4th.—There is good reason to believe that a Zeppelin has been destroyed in the North Sea.

The announcement said that a fishing trawler had reported yesterday to the naval authorities that she had seen a "German Zeppelin" in the North Sea in a sinking condition.

The Germans spoke yesterday in their bulletin of vigorous artillery action over a wide front. Considerable emphasis is laid in this enemy bulletin on the extreme violence of the bombardment by the Allied guns.

The enemy claims to have occupied the craters caused by the explosion of two British mines north-east of Hulluch, and to have shot down a British and a French battle-aeroplane

near Peronne.

A Zeppelin attempted to make a second raid on Salonika on Wednesday evening. It was fired on by British batteries and had to retire.

The Military Service Bill was promulgated yesterday. It is to come into operation on February 10. Regulations as to the constitution, functions, and procedure of the tribunals were issued yesterday.

February 5th.—The Germans admit the loss of the Zeppelin wrecked in the North Sea. Their Admiralty issued yesterday an official statement that the airship did not return from "a reconnoitring cruise."

The *communiques* from Paris and Berlin show little activity on the Western front. That from Paris yesterday afternoon was almost wholly destitute of news; that from Berlin recorded the explosion of another British mine near Hulluck and claimed the capture of a French biplane with its pilot, who had lost his way.

The allied columns in Cameroons are closing in on the remnant of the Germans. Many of the enemy have retired over the frontier of Spanish Guinea, which French columnus are now approaching.

Difficulties with Sweden about imports by sea appear to be less acute. The Foreign Office announced yesterday that there was reason to think that their suspicions about the cargo of the Swedish ship Stockholm were unfounded.

February 7th—The French *communiques* of Saturday and Sunday showed that two German aeroplanes have been destroyed, and said that French guus destroyed German gas receptacles, whose fumes spread over the enemy's lines.

Fridays' *communique* from Petrograd speaks chiefly of German aeroplane and Zeppelin flights over the Russian lines near Dvinsk, and of scouting and outpost actions without much consequence at other parts of the front.

The Austrian Offical reports allege that the enemy's advance guards are about 25 miles north-east of Durazzo in Albania. It

seems that negotiations between Austria-Hungary and Montenegro have not begun because there is no one with authority to negotiate on behalf of Montenegro.

February 8th.—Hostilities on the Bukovina frontier have begun again between the Russians and the Austrians. The fighting was desperate and bloody, the Russians doing great execution with the bayonet. The enemy's casualties in a single engagement were 2,000 killed.

The German bulletin yesterday said that there had been fierce artillery battles between the La Bassee Canal and Arras, as well as to the south of the Somme. Lens has again been violently bombarded by the Allies.

Effective practice by the French artillery was again reported in the *communiqué* issued in Paris last night. North-east of Arras big explosions were caused in the German lines, while at one point in Champagne a bombardment of enemy establishments by heavy artillery resulted in an "Extensive conflagration."

February 9th.—There has been minor naval action in the Adriatic. A British cruiser and a French torpedo-boat covering the retirement of the Serbian Army met four enemy destroyers and fired upon them. They fled towards Cattaro.

Next day the two Allied warships were attacked again off Durazzo by an enemy submarine. It attempted to torpedo the cruiser, but missed, was pursued, and was unable to renew the attack.

Statements in the Berlin Press allege that Germany has captured 1,429,971 prisoners, 9,700 guns, 7,700 munition wagons and other vehicles, 1,300,000 rifles, and 3,000 machine-guns.

February 10th.—Where the French lines run below the Vimy ridge just east of Neuville St. Vaast, the Germans have made another of their periodic attacks. They made a good deal of it in their *communiqué* yesterday, declaring that they had stormed the French front trenches over a front of more than 800 yards and had taken over 100 prisoners and five machine-guns.

The French account put a different complexion on the affair. According to them two German mines exploded and wrecked their front trenches. The enemy established himself among the *aerbris* and at "some points of our parallel trench," from which, during the night, he was driven by a grenade attack.

The night Paris *communiqué* recorded the repulse of an enemy infantry attack in the same region. Heavy artillery continued the bombardment of German positions in Belgium. Belfort was again shelled by the enemy.

A *communiqué* from Petrograd last night shows that in Galicia, where some of the heaviest of the recent fighting has taken place, the Russians have again driven the enemy back to the west of the Dniester and have established themselves on the west bank of the river.

British Headquarters corrected yesterday an assertion in Tuesday's Berlin bulletin that a squadron of German aeroplanes had bombarded a British camp and railway establishment near Poperinghe. What happened was that a single enemy aeroplane dropped four bombs near Poperinghe station, but did no damage.

General Smuts is to take command of the British and South African troops engaged in the East African campaign. General Sir Horace Smith-Dorrien has resigned the command owing to ill-health.

A Proclamation has been issued under the Military Service Act, which came into force yesterday, calling up the classes from 2 to 12. They comprise single men aged from 19 to 30. Such men are to report themselves for service not later than March 17. The first batch will be required to present themselves on March 3.

February 11th.—Germany has sent a Note to the United States as to the arming of merchantmen of the Allies.

She warns the United States and other neutrals that, after a reasonable interval, she will treat armed merchantmen as belligerent vessels, and will not take any res-

ponsibility for the fate of neutral subjects on board such armed merchantmen.

Sparse and not very intelligible accounts are still being issued from Paris and Berlin about the fighting near the Vimy ridge, which dominates from the east the plain of Artois.

The French tell us that grenade attacks drove the enemy out of some of his communication trenches west of La Folie, and that they have made progress by bombing, having also repulsed two attacks by the enemy west of Hill 140.

A successful bombing raid by 18 British aeroplanes on enemy huts at Terhand was reported from Bitish Headquarters last night. All the machines returned safely.

The Russians on the Dniester in Galicia have captured Uscieczko and have driven the enemy back from the west bank of the river. At Uscieczko the enemy held a bridge-head in a position of great natural strength. They had fortified a ridge between the Dniester and its tributary the Zurin. The slopes of the ridge, covered with dense brushwood, had been strengthened by every kind of device. The whole formed a fortress dominating a wide stretch of country on the east bank of the river.

The Greek Chamber has adopted a vote of confidence in the Government. M. Skouloudis, the Prime Minister, reasserted the determination of the Goverment to preserve the neutrality of his country, a policy which events had fully justified. He protested against the landing of the Allies at Corfu and at Kara Burnu.

February 12th.—The Belgian Legation announce that the rumours which have been circulated to the effect that peace proposals have recently been made by Germany to the Belgian Government are devoid of foundation.

February 14th..—Local attacks on the Western front are becoming more frequent, and the comparative inaction of the winter is over.

A German effort to push forward north of Ypres, from positions which have lately been heavily pounded by British and

French artillery was checked. The points from which the attack came were three—Pilkem, on the British front; Steenstraate and Het Sast on the French positions to the north.

Near Pilkem, early on Saturday morning the Germans broke into our trenches, but they were driven out by bombing parties. Two other abortive attacks followed.

At Steenstraate and Het Sast the enemy made several attempts to cross the Yser Canal.

Attacking north-east of Mesnil Hill in Champagne, the French have captured a long stretch of trench, and have held it, in spite of numerous counter-attacks. A little to the west, between the Navarin and St. Souplet roads, the Germans have penetrated a small salient in the French line, where they claim to have taken 200 prisoners.

Enemy attacks at four different points in the neighbourhood of Vimy were reported in last night's Paris *communiqué*. Three of these were stopped dead by the French fire. In the other case the Germans succeeded in penetrating the first line of French trenches, but they were almost immediately driven out.

On Saturday Austrian aeroplanes raided the Adriatic coast of Italy and killed 15 people, including several women and children.

South Africans have been in action in Western Egypt. Landing at Mersa Matru on January 22, they were sent into the desert on the following day against the Senussi. With the 15th Sikhs they advanced in the open against an entrenched position and routed the enemy. They lost eight killed and 110 wounded.

February 15th.—Russian troops have captured one of the forts of Erzerum. In the pursuit of the Turks numerous prisoners and six guns have fallen into Russian hands.

The Germans scored two local successes, one near the Tahure-Somme-Py road in Champagne, where an advanced trench was taken, and a second at Sept, in Alsace, where 220 yards of trenches were taken from the French, who, however, have

regained the greater part of the lost ground. An intense enemy artillery bombardment in this direction was reported in the night Paris *communique*.

The former action is magnified by the German report, which says that a position, 750 yards in extent, was wrested from the French, who lost seven officers and over 300 men prisoners.

British Headquarters report 17 fights in the air on Sunday, and one machine driven down in the enemy's lines. Eight German mines were exploded in 24 hours south of La Bassee Canal. South of Fosse 8, after mine explosions, there was a small infantry attack and a few of the enemy got into our front trenches, but were quickly driven out by grenades.

The light cruiser Arethusa, which did such good work in the Heligoland Bight and Dogger Bank actions, has struck a mine off the East Coast. About 10 lives were lost, and the Admiralty fears that she will become a total wreck.

The loss of the French cruiser, Amiral Charner, is confirmed. Off the coast of Syria a raft has been found on which were 15 seamen, only one of whom was alive. This seaman says the cruiser was torpedoed on February 8, and sank without the crew being able to launch the boats.

The Austrian air raid on Ravenna has been followed by a raid further afield, at Milan. Two Aviatiks appeared over the city yesterday morning, and, dropping bombs, killed eight and injured 70 people. No military damage was done.

February 16th.—We lost 600 yards of a front trench south-east of Ypres, between the Ypres-Comines railway and the Ypres-Comines Canal.

Several German attacks were launched after a bombardment of the whole of the Ypres salient on Monday night, and one of them succeeded. Heavy bombardment on both sides

continues.

In Champagne the French recaptured a part of the advanced positions occupied by the enemy on Sunday last to the east of the Tahure-Somme-Py road. These positions, which are close to the village of Tahure, are the most northerly that the French gained in their great effort last September.

The Russians have captured another of the Erzerum forts with more than 20 guns.

The series of Austrian air raids were continued yesterday with an attack on Schio, 50 miles from Venice. Six people were killed.

Speaking of the campaign in Mesopotamia, the Prime Minister said the situation had distinctly improved. General Townshend was holding his own, and had supplies which ought to last a considerable time. General Aylmer's reinforcements ought to have completely reached him by this time. He thought that there was every ground for hope that the two forces might unite, and that anything in the nature of a British check might be averted.

February 17th.—The Grand Duke Nicholas has taken Erzerum.

Since the Russians broke the Turkish line on the Caucasus border a month ago they have pushed on 80 miles through a country hitherto thought to be impossible for a winter campaign.

From a message from the Grand Duke to the Emperor it is learnt that Erzerum was taken "after five days of unprecedented assault."

Fighting to regain the trench lost to the south-east of Ypres still continues. It was rendered untenable, according to a report from British Headquarters, by the explosion of five mines. The trench is known as "the International Trench" because it so frequently changed hands last year.

On Tuesday, the Berlin report asserts, the British made three vain attacks on the trenches which had been lost to them.

Their losses in prisoners were about 100.

Some of the trenches taken by the Germans north-west of Tahure, in Champagne, on February 13 had already been re-captured. To-day the French official report says that more of them have been regained by grenade fighting.

The French view of the various German local attacks is expressed in a semi-official statement issued in Paris. They have cost the Germans extremely heavy losses, for which they have nothing to show. Preparations for them had been made for months, and their only justification was the desire to exploit the slightest semblance of success.

On Tuesday afternoon 13 French aeroplanes raided the encampments in the Bulgarian town of Strumnitz, north of Salonika. About 150 bombs were thrown, and several fires broke out.

Great Britain, France, and Russia have renewed to Belgium the covenant that they will not end hostilities until Belgium has been restored to political and economic independence and liberally indemnified for the damage she has sustained. They will lend their aid to Belgium to ensure her commercial and financial recovery.

The United States refuses to recognize the German claim that her submarines have a right to torpedo armed merchant ships without warning.

February 18th.—General Dobell has telegraphed from Cameroon that active operations in this German colony are now practically ended, and the conquest of Cameroon is complete, with the exception of one isolated position.

French columns have closed up the roads into Spanish Guinea to the south, but not in time to prevent the German Commandant Zimmerman from taking refuge there.

The British Headquarters report describes the situation to the south-east of Ypres, where the Germans took 600 yards of our trenches, as unchanged. On the Loos salient the enemy exploded two mines yesterday and tried to occupy a crater, but were driven out.

Speaking in the House of Lords on our defence against Zeppelins, Lord Kitchener said it was beyond our power to guarantee these shores from a repetition of incursions. During the last raid, while we were sure that one airship was lost at sea, we had good reason to believe that a second was placed out of action.

Lord Kitchener discussed the principles that governed our air defence in this country, and, in doing so, said that the construction of anti-aircraft guns had priority over other ordnance and as fast as they were produced they would be distributed to the best advantage throughout the country. The responsibility for home defence would be placed in the hands of Lord French, who would have the help of Sir Percy Scott as his expert adviser.

An enemy force of four Europeans and 200 natives attacked a frontier post in Uganda held by two Europeans and 35 native soldiers. The enemy were driven off with the loss of their European officers and 53 natives. We had no casualties.

February 19th.—The first details of the fall of Erzerum are reported in the Russian *communiqué* received early this morning. The Turkish Army is in disorderly flight and the Russians have secured great booty. All the artillery of the fortress is in their hands, and at the time the report was sent 200 guns had been counted.

The English, says the German Headquarters report, have again attempted to recapture their positions to the south of Ypres. They were repulsed with saigninary losses.

No mention of an attempt to recapture the "International Trench" is made by the British reports beyond the fact that yesterday our guns bombarded the position. On the whole of the Ypres front artillery on both sides was generally active.

Austrian and Bulgarian columns are now close to the port of Durazzo, on the coast of Albania, the Austrians having come down the coast from Skutari through Alessio, and the Bulgarians across Albania through Elbasan. The Serbian troops are now all on the island of Corfu.

A message from the ex-Governor of Cameroons confirms

General Dobell's telegram, that the conquest of the German Colony is complete.

The message is addressed to the German Colonial Minister. It is to the effect that want of munitions compelled the German troops to cross into Spanish territory, beginning on February 4, and that the Spanish Government desires their internment at Fernando Po.

February 21st.—The army of the Grand Duke Nicholas is pursuing the Turks along the roads to Erzingan on the west and Trebizond on the north-west. On the north-west the remains of the 34th Turkish Division, with 13 guns, have been captured.

While the Turks were occupied with the defence of Erzerum a Russian force swept down on their left flank and took Melazgert, north of Lake Van. From here a column struck west and captured Khnys, cutting the Turkish line of retreat from Erzerum to the south.

Other columns from Melazgert went south and south-west, and both these have been successful. One column has reached Lake Van and has taken by storm the town of Akhlat; the other has pushed down the valley of the Eastern Euphrates to the town of Mush, 125 miles from the Baghdad railway.

During the week-end the Germans made three infantry attacks against our lines; two south of Arras and one north of Ypres. The first was at Gommecourt on Friday—a night raid, on a small scale, such as our troops have frequently carried out. We lost a few men prisoners, and had seven casualties.

The enemy made a raid west of Serre after a heavy bombardment. The raid failed completely. South-east of Boesinghe, north of Ypres, we lost an unimportant advanced post. The French were unsuccessfully attacked at Steenstraate.

Our aeroplanes made a successful night attack against Cambrai aerodrome, bombs being dropped on and exploding inside the sheds.

The last German post to hold out in Cameroon has been surrendered. This was the station of Mora, in the far north

of the colony, where a company of native troops, with three or four German officers, held an inaccessible height.

The greatest activity in air warfare has been shown on the various fronts, and numerous aerial fights are recorded. The French brought down a Zeppelin in flames by means of an incendiary shell fired from the gun of a motor section.

They also record the destruction or capture of three aeroplanes in the course of the day. One of these was brought down in a fight against an enemy air squadron of 15 machines.

Don, an important junction and depot in the German communications behind their lines in Flanders, has been visited by a squadron of 26 British aeroplanes. Extensive damage is believed to have been done to the stores and railway. All the machines returned safely.

German aeroplanes have bombarded Luneville, Dombasle, and Nancy, and have done slight damage.

February 22nd.—The Germans launched successive gas attacks against the French on a front of nearly five miles in the Lihous sector, south of the Somme. The attempt of the enemy infantry to leave their trenches was, however, defeated.

While reconnoitring the enemy's advanced posts in the Sinai Peninsula, a British aeroplane, descending to 600ft., destroyed a power station at El Hassaua (50 miles east of the canal) with a 100lb. bomb.

Recently the Turks reported that bombs had been dropped on Kut-el-Amara. Hostile aircraft flew over the camp on February 17 and 19, but did no damage.

The Prime Minister yesterday submitted two further Votes of Credit to the House of Commons, one a supplementary vote for the current year, and the other a vote for the coming financial year. The supplementary vote is for £120,000,000, making for the present year votes amounting to £1,420,000,000. The vote for the coming financial year is for £300,000,000, making the total Votes of Credit since the outbreak of war £2,082,000,000.

February 23rd.—For the first time since the opening stages of

the war the Germans have made a serious attack on the outer defences of Verdun. The attack came in the broken and wooded country eight miles to the north of the fortress on the evening of the 21st and was heralded by a fierce bombardment of the French positions.

A few miles east of the Meuse, between Haumont Wood and the village of Herbebois, the enemy gained a footing in some of the French advanced trenches, and at some points reached the supporting line. From the latter they were driven out with the loss of 50 prisoners.

The German attacks continued on the 22nd and spread to the banks of the Meuse. They failed on the flanks at Brabant and Herbebois, but were successful, at the cost of heavy losses, in the centre, where the Haumont Wood and the French salient to the north of Beaumont were carried.

Another determined attack was made from the western spurs of the Vimy Ridge. The points of attack were the French trenches in Givenchy Wood, to the east of Souchez.

The French advanced trenches were completely wrecked on a front of half a mile, and at several points the enemy reached the supporting line, where he was driven out for the most part. The attacking force was estimated by the French at seven battalions, and it suffered heavy losses from the French fire.

Russian troops took advantage of the Turkish confusion on the fall of Erzerum to advance along the Black Sea coast from Arkhave towards Trebizond. They are now near Rizeh, about 40 miles east of Trebizond along the coast road.

The Turkish losses at Erzerum are now estimated at figures between 30,000 and 40,000 out of a strength of 100,000.

The Turks have at last acknowledged that they have lost Erzerum, and have issued a *communiqué* that the army retired from the position without loss for military reasons.

The Zeppelin brought down by the French on Monday was the L 77. of recent construction. It was hit by an in-

cendiary shell near Brabant-le-Roi, and taking fire, slowly descended. When it touched the ground the bombs it was carrying blew up. Only a tangled mass of wreckage, among which were between 20 and 30 naked corpses, was found.

February 24th.—The battle for Verdun, which opened with an attack by the Crown Prince's Army eight miles to the north of the fortress on the night of the 21st continues with increasing violence. The French have won back some of the ground they had lost, but had to give way at other points.

On a front of over nine miles, from the Meuse to Ornes, south-east of the village of Herbebois, the infantry fighting is described by the French report as violent.

Attacking in great strength, with troops from seven different army corps, the Germans, in spite of extremely heavy losses, and repulses at several points, succeeded in penetrating into the Bois de La Wavrille, east of the Bois des Caures.

To the west of the wood the French have evacuated the village of Haumont. The artillery action extended over a front of nearly 25 miles.

The German Headquarters report of the fighting is that their troops have penetrated up to two miles into the French positions, and that the French have lost over 3,000 men in prisoners alone.

The report adds that in Upper Alsace a German attack to the east of Heidwiler gained a French position 800 yards wide and 80 prisoners.

Lately German Zeppelins and aeroplanes have been busy in the Baltic provinces. The current Russian official report says that several aeroplanes have dropped bombs on the districts of Riga, Friedrichstadt, and Jacobstadt, and that Zeppelins have flown over Dvinsk.

The Emperor of Russia, for the first time in history, attended the opening of the Duma, and was received with great enthusiasm. In a short speech he said how glad he was to be amongst his people in the auspicious hour of the glorious victory in the Caucasus.

A "peace debate" was raised in the House of Commons by Mr. Snowden and Mr. Trevelyan. The Prime Minister replied to their arguments, and repeated his declaration of the terms on which we would make peace—the restoration of Belgium, to which he added Serbia, the security of France against aggression, and the destruction of the military domination of Prussia.

February 25th.—The French forward line to the north of Verdun has been withdrawn without the front being broken by the attacks of the army under the Crown Prince. The withdrawal involved the evacuation of Brabant-sur-Meuse, Samogneux, part of the Bois des Caures, which had been retaken by the French, and Ornes.

It was carried out, says the French official report, to prevent useless losses by the violent bombardment. There was perfect order, and the enemy were only able to advance at the cost of heavy sacrifices.

The artillery battle now extends to a front of 25 miles, roughly a semi-circle of Verdun with a radius of 10 miles from Malancourt on the west to Fromezey on the east. The infantry actions are in the centre across nine miles of wooded heights from the Meuse near Brabant to Ornes.

The German steamers which have been lying in the Tagus since the outbreak of war have been seized, and the Portuguese flag is flying over them. On behalf of the Portuguese Government it is stated that the seizure was due to the fear that the ships might try to escape, and the Government needed them for transport.

February 26th.—A new line has been taken up by the French six or seven miles to the north of Verdun, on the line of heights stretching east from the River Meuse at Champueuville to the south of Ornes, nine miles away.

The French report of yesterday afternoon is geographically in agreement with the German report. The latter, however, claims that the fortified villages and farms from which the French retreated were taken by storm, that the French losses

were "extraordinarily heavy," that more than 10,000 prisoners were taken, and that the German losses were normal.

The evening *communiqué* reports a renewal of furious fighting north of Verdun. Several German attacks with large forces on the Hill of Poivre were unsuccessful.

In Champagne the French took the offensive and captured a salient, with 300 prisoners, including five officers.

British aeroplanes have carried out a successful bombing raid against an enemy aerodrome near Lille. All our Machines returned safely.

General Aylmer's forces, 25 miles from Kut, have thrown forward their trenches within 600 yards of the Turkish positions.

General Townshend reports sufficient supplies for a long time for his division. Light supplies have been sent to him by aeroplane. He is sowing vegetable seeds and has asked for gramophone needles. The Turks have ceased their costly attacks on his position.

After a series of battles in Persia, says a Russian dispatch from Teheran, the remains of the enemy have concentrated near Kermanshah, on the Teheran-Baghdad road.

The Austrians say they have taken all the outer defences of the Albanian port of Durazzo, and that the Italian troops have taken refuge in the inner defences.

February 28th.—The battle round Verdun continues.

The Germans made much of the storming of Douaumont, one of the outer forts of Verdun. The French denied that the enemy hold this fort, and showed that so far from the enemy holding this fort, "the French are to-day beyond the fort."

Yesterday there was a distinct lull in the German attack north of Verdun, but to the east of the fortress a new movement has developed. Here the French have withdrawn their line about six miles without fighting, since their positions formed a very pronounced salient. A new German attack, testing the line to which the French have withdrawn about

eight miles east of Verdun, had no success.

A Russian *communiqué* which reached this country last night describes the difficulties of the Russian pursuit in the Caucasus. Their troops are advancing through deep snow.

General Kuropatkin has been appointed to the chief command of the Russian armies on the northern front in place of General Plehve.

The first complete account of the booty taken by the Russians at Erzerum was published on Saturday. The Turkish prisoners numbered 235 officers and 12,753 men. The Russians also took 323 guns and large depots of arms, munitions, and other supplies.

The enemy in Western Egypt has again been defeated. A British column composed of South African troops, Yeomanry, and Territorial artillery engaged him on Saturday and routed him completely.

February 29th.—Accounts of the Verdun battle show that during the week-end it reached a critical stage. Determined German attacks at last succeeded in carrying the end of the ridge of Douaumont.

Then the French counter-attack was launched. It swept the ridge clear except at one point. There a remnant of the enemy cling to the position they have gained, but the French surround them almost completely.

Both the French and the German dispatches yesterday spoke of desperate attack and counter-attack at this point. Meanwhile, to the east of Verdun, the French hold their new line against German attacks which hardly seem as yet to have developed their full weight, for the French still hold the foot-hills, though they have withdrawn from their trenches in the plain.

General Aylmer, commanding the column which is to relieve Kut, has bombarded the enemy's position. The Tigris is rising again and another flood is expected.

March 1st.—The enemy is making no progress in his massed attacks on the entrenched line of Verdun, and the

result of the battle is still in the balance. The region of the village of Douaumont remains the centre of fierce hand-to-hand fighting, but the enemy makes no way towards the mastery of this critical point.

East of Verdun he is now in contact with the new French line. He has driven the French from some of the villages at the foot of the heights to which they have retired, but has nowhere carried to success an attack on the heights themselves.

Among the villages that have fallen to him is Manheulles, on the main road from Metz to Paris, through Verdun. Here the French counter-attacked and pinned him to the village, whose western outskirts they "hold under their fire." The enemy claims to have taken up to Monday evening 228 officers, 16,575 men, 78 guns, 86 machine-guns, and material beyond counting.

Last night's Paris *communiqué* recorded no infantry action during the day in the Verdun region. It stated, however, that the Germans are entrenching on the Poivre Ridge. In the Vosges there was great artillery activity.

The report from British Headquarters last night described the destruction of two enemy aeroplanes, and gave details of places bombarded by our artillery. The Admiralty announced the destruction of another enemy aeroplane, which was shot down in front of the Belgian lines.

An auxiliary French transport, the Provence II., was sunk on February 26 in the Central Mediterranean. She went down in 14 minutes. There were about 1,800 men on board. Of these 870 are believed to have been saved.

The casualties in the British force engaged in the Salonika operations up to February 20 were:—Officers, 57; other ranks, 1,439.

March 2nd.—German artillery activity to the north of Verdun and in the Woëvre. Germans penetrate into village of Douaumont; furious street fighting; attack on village of Vaux repulsed. British recapture the "International Trench" to the south-

east of Ypres. Russians capture Bitlis and take six guns.

March 3rd.—Germans bombard "Mort Homme" and Forges. Heavy fighting at Douaumont.

March 4th.—Bombardment of Douaumont continues; German assault east of the Poivre ridge frustrated. Russian forces land at Atina, on the Black Sea coast, 60 miles from Trebizond ; land forces occupy Maprava, between Atina and Rizch.

Fighting near the Hoheuzollern redoubt.

March 5th.—Three Zeppelins raid the East and North-East Coasts ; eight counties visited: 70 casualties.

March 6th.—There has been a change in German tactics at Verdun, attacks on the wings in substitution of costly assaults on the main French front.

The constant bombardment of the French positions on the hills south of the line Malancourt-Forges—Haucourt, Mort Homme, and Cote de l'Oie—gave the French the expectation that an infantry attack was coming on the west of the Meuse.

It came near the river at the village of Forges, where the French positions were well north of those on the east of the river and thus under heavy fire from the German guns.

From Forges the enemy pushed along the railway line through Regneville, and at the same time made an attack on Hill 265, just north-east of the Cote de l'Oie. This latter attack was carried out by a German division. It succeeded, though the German losses were very heavy. The French still hold the main heights on the west of the Meuse.

To the south-east of Verdun the enemy attacked Fresnes, where the French line jutted out into the Woevre Plain.

Yesterday was quiet on the British front, except near Hohenzollern Redoubt, where the enemy made three unsuccessful bombing attacks.

Russian troops continue their advance towards Trebizond, and in Persia have taken Cola, 27 miles west of Kermanshah.

March 7th.—Germans capture Fresnes, south-east of Verdun; French retake nearly all the Corbeaux Wood south of Forges ;

German attack near Douaumont repulsed. French recapture trenches in Champagne. Russian progress towards Trebizond ; Rizeh occupied.

Mr. Balfour in his speech on the navy estimates said that the Navy had increased by a million tons since the war broke out.

The British troops in East Africa under the command of General Smuts, have advanced against the German forces in the Kilimanjaro area. General Smuts seized the crossing of the Lumi river with insignificant loss, and successfully repelled several enemy counter-attacks.

March 8th.—General Aylmer attacks the Es Siuu position, seven miles from Kut ; falls back from want of water.

Germans in two hours pour 80,000 shells upon the French positions at and around Vaux Fort. Infantry advance to attack in column of fours. Germans, prematurely, announce the capture of Fort Vaux. Attack defeated, Vaux remains in French hands.

March 9th.—French progress in the Corbeaux Wood continued. German attacks on fort and village of Vaux repulsed with great loss. General Van der Vauter occupies Taveta and Salaita, East Africa.

March 10th.—Furious struggle in the Corbeaux Wood; Germans recapture part of the wood; slight German gains at Bethincourt and in Vaux village. Germany declares war on Portugal.

March 11th.—German surprise attack near Reims, between Troyon and Berry-au-Bac ; some French positions penetrated. Russians occupy Kerind, on the road to Baghdad. General Smuts defeats Germans west of Taveta ; Germans retreating towards the Usambara Railway, and the campaign in East Africa is being pressed on with energy and success. German positions, strongly held, in the hills west of Taveta, were attacked. The fight lasted all day and our troops got a lodgment and held on through the night. In the morning the enemy retired.

Meanwhile one of General Smuts's mounted brigades was driving German forces, which had been isolated by our advance on March 8, 9, 10, from the north-eastern foothills of Mount

Kilimanjaro.

At the same time a British column struck straight down from the north, behind Kilimanjaro, and cut the communications of both German forces to the west. These combined operations were most successful.

The German infantry is still inactive before the French lines round Verdun. The last attack was made on Friday night. The guns on both sides continue the battle.

March 13th.—General Smuts occupies Moshi and advances on Arusha.

March 14th.—German assaults on Verdun renewed; attack between Bethincourt and Cumieres repulsed, though they gain a footing on the lower slopes of Mort Homme. Major-General Peyton reoccupies Sollum, Egyptian frontier post evacuated by the Senussi Arabs.

March 15th.—French regain part of the ground lost at Mort Homme.

The French line west of the Meuse now includes Bethincourt, the heights of Mort Homme, the southern edge of the wood of Cumieres, and the village of Cumieres.

Fresh German assault on Mort Homme repulsed; German attack on village and fort of Vaux repulsed. General Gallieni, French Minister of War, resigns, and is succeeded by General Roques.

March 18th.—French air raid on Mulhausen, a battle takes place in the air, French lose four, Germans three machines.

Allied air raid on Zeebrugge.

March 19th.—German attack on extreme left of French lines at Verdun; the wood of Avocourt carried. Russians enter Isphahan.

March 20th.—German attack on Poivre heights repulsed; liquid fire attack between Avocourt and Malancourt repulsed. Skirmish in the North Sea; three German destroyers chased by four British destroyers back to Zeebrugge; 65 British, French, and Belgian aeroplanes bombard German seaplane station at Zeebrugge and aerodrome at Houtlave with four tons of

explosives.

March 21st.—General Russian offensive from Gulf of Riga to south of Dvinsk; progress at Lake Narotch, east of Vilna. German-Bulgar outposts driven in by the French at Matchukovo, north of Salonika. General Smuts defeats the Germans in East Africa near Kalem where the enemy stood upon a strong position in hill-forest country. The South African mounted troops worked round behind him, threatening his communications and compelling him to retire.

The enemy was reinforced, but found himself compelled to wait for darkness before he retired. This enabled General Smuts' men to inflict heavy losses upon him "which would not have been possible had the Germans been free to abandon their positions earlier."

The enemy held out through the day of March 21 and retired that night. He evacuated the whole of his position, and left in our hands a 4.1 in. gun, "portion of the armament of the Konigsberg."

Lord Kitchener has sent a telegram to General Smuts congratulating him and all ranks under his command on this brilliant success and on the dash and energy with which, in a difficult country, the operations have been conducted.

March 22nd.—Germans gain a footing at Haucourt, south of Malancourt, threatening Mort Homme.

March 23rd.—British *communiqué* records fighting in new sector taken over from the French from Souchez to Arras.

March 24th.—Russians occupy Khizan, 35 miles south-east of Bitlis.

March 25th.—British seaplanes raid German sheds in Schleswig Holstein, east of island of Sylt; three of them captured. Two of the convoying destroyers, Medusa and Laverock, in collision, the Medusa lost; two German patrol vessels sunk, German destroyer rammed and sunk by H. M. S. Cleopatra.

March 28th.—Russian offensive continues; trenches captured at Postavy.

March 27th.—British success at St. Eloi; the first and second line trenches on a front of 600 yards captured. Russians occupy Of, 30 miles from Trebizonde. Fierce Austro-Hungarian attacks on the heights north-east of Gorizia; Italian centre forced back.

March 28th.—Fighting at St. Eloi continues. Fresh German assault on Haucourt-Malancourt line repulsed. Italian counter-attack at Gorizia; lost trenches recovered; 302 prisoners taken.

March 29th.—French drive the Germans from the south-eastern horn of the Wood of Avocourt over a depth of 300 yards, and retake the Avocourt redoubt; German counter-attacks repulsed. German attack between Malancourt and Bethincourt; they reach an advanced work outside Malancourt. General Polivanoff, Russian Minister of War, resigns, and is succeeded by General Shuvaleff.

March 30th.—Fresh German attacks on Fort Douaumont repulsed. German bombers succeed in reaching captured trenches at St. Eloi.

April 1st.—German attack between fort of Douaumont and Vaux repulsed. Two Zeppelins off, and one crosses, the North-East coast; 116 casualties.

April 2nd.—Germans gain a slight footing in the Caillette Wood. Six Zeppelins raid the coast of Scotland (21 casualties) and Northern and South-Eastern counties of England (no casualties).

April 3rd.—British success at St. Eloi; a mine crater recaptured and 84 prisoners taken. French drive Germans from northern edge of the Caillette Wood and reoccupy western portion of Vaux village.

A squadron of Allied airmen dropped 83 bombs of heavy calibre on the enemy cantonments of Keyem, Essen, Terrest, and Houthulst. Four German aeroplanes were brought down during the day by French airmen in the region of Verdun.

April 4th.—German attack on French at Verdun renewed

without success; further French progress in Caillete Wood. Zeppelin crosses the East Anglian coast; no damage done.

April 5th.—German attack at Verdun takes the village of Haucourt; attack against Bethincourt fails. Turkish positions at Umm el Hannah, 20 miles from Kut, carried by General Gorringe.

The British in the early morning took five lines of Turkish trenches on the left bank of the Tigris at Umm el Hannah. The enemy retired to two other positions—Falahiyah and San-na-i-yat, the one 6,000 the other 12,000 yards from the front trenches at Umm el Hannah. There he began to strengthen his entrenchments.

The ground in front of these positions was open, so General Gorringe waited for the evening. During the day he attacked and captured more trenches on the right bank, and held them against a vigorous counter-attack. Then, at 8 o'clock in the evening, he attacked and carried the Falahiyah position.

Anglo-French squadron sinks a German submarine; crew taken prisoners. Three Zeppelins raid the North-East coast; one apparently hit by gunfire; nine casualties.

General Ivanoff has retired from the command of the Russian Armies of the South. The Tsar has sent him a message of regret. His successor is General Brusiloff, who has been his chief subordinate in the southern command.

April 6th.—German attack on French salient at Hill 304, west of the Meuse; French lines penetrated in some places. German attack on new British positions at St. Eloi; portion of their lost ground regained.

On April 3 and 4 a detachment of mounted troops under General van der Venter surprised and surrounded a German force stationed in a mountain stronghold in the Arusha district of East Africa. The force surrendered on April 6.

April 7th.—German attack on Hill 304 repulsed.

April 8th.—French evacuate the Bethincourt salient as the result of a carefully prepared attack. The infantry advance was on a front of 12 miles from the Meuse and it gained a foot-

ing on the slopes of the Mort Homme position.

April 9th.—Great German assault at Verdun; an advanced trench on Mort Homme penetrated. British attack on Sanna-i-Yat position fails.

April 10th.—German attack on Mort Homme secures a footing in some portions of the trenches. British recapture mine crater at St. Eloi. Kionga, in East Africa, occupied by Portuguese troops.

April 11th.—German attack between Douaumont and Vaux repulsed.

April 12th.—German attack on French positions on the left bank of the Meuse repulsed. German attack on British trenches on the Ypres-Pilkem road; a trench gained and lost. British advance on the right bank of the Tigris opposite Sanna-i-Yat. General Van der Venter occupies Ummugwe (Kothershiem), East Africa.

April 13th.—Australian reconnaissance at Jifjaffa, Egypt; Katia oasis occupied.

April 14th.—Three of our aeroplanes raided Constantinople. They dropped bombs on the Zeitunklik powder factory and on the aeroplane sheds.

The raid involved a journey of more than 300 miles there and back. The weather was fine at the start, but later on the conditions were adverse, with wind, rain, and thunderstorms.

Another naval aeroplane raided Adrianople and dropped bombs on the railway station.

The Admiralty announcement gives the names of the officers who made these raids, and says that all have returned safely.

April 15th.—Successful French attack at Douaumont; German trenches occupied and 200 prisoners taken. Further British advance opposite Sanna-i-Yat.

April 16th.—Russian advance on Trebizond; Surmaneh occupied. Further fighting on the Tigris.

April 17th.—Fall of Trebizond. German attack between the

Meuse and Douaumont repulsed. Turkish counter-attacks at Sanna-i-Yat; slight British repulse, heavy Turkish losses. Fighting at Kondoia Irangi, East Africa.

April 19th.—German attacks at Les Eparges repulsed. General Van der venter occupies Kondoia Irangi.

The Russians have occupied a high mountain range between Erzerum and Ersinjan, capturing Turkish prisoners.

Death of Field Marshal Von der Goltz.

The Germans attacked the British line round Ypres at four points. They entered the trenches, but were driven out everywhere except at St. Eloi, where they hold two craters, and on the Ypres-Langemarck Road, where they hold one trench.

Their report declares that on the Ypres Langemarck road they have firmly maintained their ground against grenade attacks. They reckon their captures at one officer, 108 men, and two machine-guns.

The French in the centre of their Verdun positions, near the Pond of Vaux, have attacked the enemy, have occupied some trench sectors, and have taken a fortified redoubt.

During this attack they inflicted severe loss on the enemy and captured 16 officers and N.C.O.'s with 214 men, several machine-guns, and some material of war.

A detachment of Russian troops arrived at Marseilles yesterday morning. Their arrival is announced in an Order of the Day by General Joffre, who welcomes the Russians, "come to fight with the French."

April 20th.—German auxiliary and submarine attempt to land arms and ammunition at Tralee, on the coast of Kerry; Sir Roger Casement and other prisoners captured; auxiliary scuttled.

April 21st.—British recapture trench on the Ypres-Langemarck road.

The War Office publishes more details about the Turkish counter-attacks on the night of April 17 which retook some of the trenches that our men had occupied on the banks of the Tigris.

The Turks were some 10,000 strong. They attacked in

dense formation. Their killed alone on the night of April 17 are estimated at more than 3,000 men. Our losses in killed, wounded, and missing were considerably less than theirs in men killed.

They seem to have thought that part of our force was isolated, and that they could overwhelm it. In several of the attacks they were led by Germans, some of whom are among the killed.

The day after these attacks—April 18—was stormy. Reconnaissance by aircraft has been very difficult. The floods are spreading, and the river is still very high.

The French attack in the Mort Homme region went forward during Thursday night. They captured a trench in the Caurettes Wood, and took prisoners four officers and 150 men.

The German report yesterday declared that "the attack as a whole was repelled with great slaughter," but admits that the French penetrated into a trench in the neighbourhood of the Caurettes Wood. For this, it says, fighting is still proceeding.

April 23rd.—French progress at Caurettes Wood.

The Turkish position at Sanna-i-Yat attacked by our troops on the Tigris. The attack failed. For two days the position had been systematically bombarded.

The floods made the attack difficult. On a contracted front only one brigade could make the assault. They advanced with great gallantry and penetrated the first and second Turkish lines through bog and submerged trenches.

A few got into the third line. But the Turks counter-attacked, and the brigade could not maintain itself. Other brigades, pushing up on the right and left to reinforce it, failed to reach their objective across flooded and boggy ground under heavy machine-gum fire.

These attempts to break the Turkish lines were made on the left bank of the Tigris. On the right bank also our troops failed to make much progress.

Turco-German attack at Duweidar, Sinai Peninsula, re-

pulsed; British, attacked at Kaita, withdraw.

April 24th.—Rebellion in Ireland; body of armed men belonging to the Sinn Fein occupy Stephen's Green and take possession of the Post Office and railway stations in Dublin. Three Zeppelins raid the Eastern coast; one casualty. Hostile aeroplane driven off at Dover. Failure of attempt to get a ship with supplies through to Kut.

April 25th.—Martial law Dublin; Dublin garrison and reinforcements from Belfast and England drive the rebels from Stephen's Green. German battle-cruiser squadron off Lowestoft for about half an hour, engaged by the local naval forces; 25 casualties. Four or five Zeppelins raid the East Coast; no casualties. Secret session of Parliament on recruiting proposals.

April 26th.—Dublin rebellion well in hand; Liberty Hall destroyed and occupied by the military; a cordon of troops round the centre of the town.

New German attacks on the French lines in the Mort Homme region, again supported by the use of liquid fire, have failed with heavy losses. Another attempt in the Avocourt region was also without result.

April 27th.—The Irish situation is still grave. Martial law has been proclaimed over the whole of Ireland, and General Sir John Maxwell has gone over with plenary powers.

The rebels hold some important public buildings in Dublin and fighting continues in the streets. It is also officially announced that there are indications of a spread of the movement to other parts of the country, especially in the West.

The troops have been and are being strongly reinforced. The Government are satisfied that the force dispatched is adequate to deal with the situation.

Many attacks on our lines are reported in last night's dispatch from British Headquarters in France. The enemy entered our trenches in some places, but were nowhere able to retain their footing. South of Hulluch two gas

attacks were made. An infantry advance at this point was enfiladed by our machineguns and many corpses were left in front of our trenches.

The enemy's bulletin contained several claims of successes against the British—in the Ypres region, south of St. Eloi, and in the Givenchy-Neuville sector.

In the last-mentioned place it said that several mines were exploded, and that a portion of a trench near Givenchy was snatched from the British and held against counter-attacks.

Events at Verdun have again declined to a state of semi-inaction. The enemy has bombarded heavily the French positions at Avocourt. He also directed "a small attack" against a portion of one of the French trenches north of Verdun. It was stopped by the French curtain fire.

H.M.S. Russell strikes a mine in Mediterranean and sinks. German submarine sunk off East Coast. British submarine E22 announced sunk in the North Sea by Germans.

April 28th.—The enemy attacks made at many points on the British front on Wednesday night and Thursday have not been followed up by him.

His chief effort seems to have been north of Loos, where he came on under cover of gas discharges and gained a momentary footing in our trenches. But the 16th Irish Division counter-attacked and drove him out.

He exploded mines and attempted our positions in the Arras region, but was driven back.

April 29th.—Kut has fallen. For 143 days General Townshend's troops had held out in this desert village on the Tigris, beating off all attacks, until starvation compelled surrender. The guns and munitions were destroyed by the besieged force.

The War Office states that the force consists of 2,970 British troops and some 6,000 Indian troops and their followers. A Turkish official statement gives 13,300 as the number of the force, and adds that the surrender was

unconditional.

Before the break-up of the ice in the Lake district of the Baltic Provinces the Russian troops had, by a vigorous offensive, improved their positions from the fortress of Dvinsk to the south. They were especially successful between Lakes Narotch and Svir to the east of Vilna, where three lines of German trenches were taken.

Von Hindenburg's troops have now, after several previous efforts, retaken these trenches by an infantry attack in mass formation. The Germans claim to have inflicted heavy losses and to have taken prisoners 56 officers and 5,600 men.

Undeterred by their failure against the 16th Irish Division north of Loos, the enemy again attacked near Hulluch under cover of gas.

The attacks were beaten off, while the gas was swept back into the enemy trenches, forcing the occupants to retreat through the British barrage. The German casualties were considerable.

April 30th.—Gas was liberated from the German lines north of the Messines-Wulverghem road. The infantry attack which followed was broken up by British artillery fire. An attack by bombers near Hollandscheschuur was equally unsuccessful.

Three further German attacks were made by night on the Verdun defences, but they were no more successful than those made during the day. In one of them, west of Thiaumont Farm, liquid fire was used. The German losses at this point were severe.

North of Mort Homme on Saturday night French troops took a German trench and 53 prisoners, and yesterday another trench north of Cunieres with 30 prisoners fell to them.

Yesterday the French had a particularly good day in the air and accounted for seven German machines, several of them Fokkers.

Hope was expressed last night by the General Officer Commanding-in-Chief in Ireland that the back of the rebellion

had been broken. In Dublin the rebels are surrending freely and their leader has sent out messengers to disaffected districts in Ireland ordering surrender.

General van der Venter's troops have captured various German convoys and munitions near Koudoa Irangi.

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TWELVE MONTHS OF THE WAR ON THE EASTERN FRONT—(Continued.)

V.

The Austro-German offensive in Galicia and East Prussia.

The Russian activity in January in the Bukowina and in February and March 1915. East Prussia was regarded in some quarters as denoting the beginning of a general offensive and forward move all along the line by our allies, a view which was strengthened by the passive attitude of the enemy in the first three weeks of January. This period of three weeks is the longest that has lapsed up till now between the conclusion of an offensive movement by the enemy on some part of the front and the undertaking of a fresh one. The temporary lull was now utilized by him to complete his arrangements and to marshal his new forces and formations for the double offensive which was to be directed against the Russian flanks. It has been computed that in February there were 49 or 50 Austro-German corps on the Eastern Front. The largest grouping of 22 or 23 was on the Galician side, 15 were located in East Prussia and the remaining 12 were in Central Poland on the Bzura—Rawka—Nida line. The magnitude of the forthcoming operations may be further judged by the length of their fronts. That of the Galician operations was nearly 200 miles, whether measured from the extreme ends of the Austrian advance—the Kirlibaba and Dukla Passes, or from Zaleszczyki on the Dniester in South-eastern Galicia, thence along the Dniester to Halicz, from there westward to the Uzsok Pass and thence up to the Dukla, which line marks the actual front at one period of the

operations. The length of front of the operations in East Prussia and North Poland (to which district the battle line in the north extended after the Russians had been expelled from East Prussia), measured 300 miles on the arc from Tilsit round towards Kovno, up the Niemen to Grodno and thence by Osowiec and Ostrolenka to Plock 50 miles from the German frontier at Thorn.

(a) *The Austrian Invasion of Galicia (Map V.).*

It will be remembered that in the end of December an attempt to relieve Przemysl had been made by the Austrians by an advance through the Dukla and Lupkow Passes in the Western Carpathians. The effort had at once been arrested by the Russians who in the beginning of January were again in possession of these passes as also of the Uzsok further south, and Hungary was again threatened with invasion, and not only from this direction but also from the direction of the Bukowina nearly 200 miles away. The arrest of this renewed threat; the relief of Przemysl; the re-occupation of the Bukowina and Galicia; the seizure of the Russian lines of communication in Galicia and the turning of the line of the Vistula from the south formed the military and political objects and objectives of the enemy, for which purpose under the blind of operations against Serbia 600,000 Austrian troops with an admixture of Germans were concentrated in the end of January at Kassa, Munkacs and Maramaros Sziget in Hungary in three principal groups. The different strengths of these groups is not yet known, nor any details of their organization, the official *communiques* on both sides were often very vague and indefinite, unlike those dealing with the operations in the northern theatre in East Prussia where both Russians and Germans issued occasional reviews or reports, and the operations to be considered appeared confused and confusing, but by grouping the Austrian forces as above and dividing the extended front into corresponding sectors the involved movements and actions are capable of disentanglement and of consideration in their broad outlines.

The three sectors with their objectives and lines of ad-

vance were :—

- (a) Left section, Dukla—Rostoki ; with these two passes and that of the Lupkow between them as their lines of advance on Przemysl as the objective.
- (b) Centre section, Uzsok—Wyszkow ; with the two intermediate Vereczke and Beskid passes, and Stryj and Lemberg the objectives.
- (c) Right section, Jablonitza—Kirlibaba ; with the Dniester from the Russian frontier east of Zaleszczyki to Haliez and the Stryj—Stanislau—Husiatyn railway as the first objective and ultimately Tarnopol and the two northern railway communications of our allies.

Excepting the Jablonitza, the advance against all the passes above enumerated began simultaneously in all three sectors on the 23rd January.

In the left or Dukla—Rostoki sector it was more than a month before the Austrians were able *Left section.* to make any headway and then only by the Lupkow and Rostoki passes. They not only did not succeed in capturing the Dukla, but here on their extreme left were driven back on the 26th and 27th January to Zboro and Mezo Laborc on the Hungarian side of the Carpathians. On the 12th February the Russians captured the heights near Svidnik and next day Smolnik east of the Lupkow which was now threatened by them from three sides. On the 18th February the Russians secured another success in the capture of Vola Michova south of Smolnik. It was another ten days before the Austrians were able to announce the capture, on the 28th February, of several advanced Russian positions, and were in a position to advance down the northern slopes on Baligrod on their left and on Lutowista on their right connecting there with their centre group towards Turka. Even then the enemy's hold on the Lupkow is a precarious one the Russians on the 15th March continuing their attacks in the neighbourhood of Sindnik and so threatening their communications with Baligrod. On the 5th and 6th March the Austrians were making "futile" attacks at Baligrod and trying to cross the

upper San near Lutowista, and this line on upper course of the San is the farthest limit reached by the Austrian left group. A fortnight later on the Russians resuming the offensive in this direction after the fall of Przemysl this group finds itself falling back again on the Lupkow.

In the centre, or Uzsok—Wyszkow sector, the Austrians at first meet with more success. The **Central Section.** Uzsok Pass is captured after three days desperate fighting (23rd—26th January), and an advance is made all along the section, but it also is brought to a stop, on the 6th February, in the foothills of the Carpathians on the line Turka—Kozowa—Tuchla—Rozanka—Wyszkow. Here the Russians take up a position which proves impregnable to all the sanguinary, stubborn, desperate assaults made on it, to use the terms adopted in the German *communiques*. For nearly two months when the enemy's offensive ceases in the middle of March it is the scene of "uninterrupted tenacious fighting," to use again the German description of the prolonged struggle all along this line of which Koziova and Hill 992 near it formed the centre—a line which remains immovable for more than another month until the force of circumstances obliges its stubborn defenders to fall back in the great general retreat in Galicia in May.

Movement and manœuvres characterize the operations in the **Jablonica—Kirlibaba, or Bukowina section**. Right Section. which also opened about the 23rd January. The Austrian advance was not very rapid at first, and it was not until the 13th February that their right wing reached the river Sereth on the line Wiznic—Storozyne connecting up with their left wing which issuing from the Jablonica pass was on the line Delatyn—Kuty. The line of the Pruth was reached by the Austrian centre and right on the 17th February with the occupation of Koloemea and Czernowitz, while their left advanced north of Nadvorna, heavy fighting taking place between Nadvorna and Kolomea and on the road to Stanislau.

Lalescyki and Niezwiska on the Dniester mark the

limits reached by the Austrian right wing which also had to guard its right flank from Czernowitz to Lalescyki against the Russian forces who had retired from Czernowitz eastward towards their frontier. The Austrian left however, continued its advance, driving back the Russians north

Stanislau 21st Feb. of Stanislau on the 21st February. Two days later this wing had reached the line Nizniow—Jezupol—Zavadka, and had not only cut the Russian southern communications (the Stryj—Stanislau—Husiatyn railway), but was in rear of the Russian forces defending the Turka—Wyszkow front on the west. Russian re-inforcements were however arriving at Halicz from the north, and a very effective counter-stroke against the Austrian left flank from the direction of Dolina was in preparation. On the 28th February this flank attack began to develop on the line Roznatow—Luhu west of the Lomnica

1st March. river, and on the 1st March the Austrians began to fall back from Halicz. The Russian advance was obstinately opposed, for on the 3rd March the Austrian rearguard was still at Jezupol, and Stanislau was not evacuated until the 4th March, but the progress of the attack against their left flank which on the 3rd March had forced the Lomnica at Krasna, necessitated a further withdrawal of the Austrian left wing on Kadworna and Obertyn, where it linked up with its right wing which was still holding the Niezwiska—Zalescyki—Czernowitz line. Here by the 16th March serious fighting died away. On the 22nd March Przemysl fell, and all efforts to relieve it,

Fall of Przemysl 22nd March. directly or indirectly, from the Dukla pass to the Bukowina had failed.

It is not to be doubted that the enemy's object was a determined one to relieve Przemysl at all costs and to free Galicia. The persistency and resolution of his attacks in the centre alone on the Uzsok front sufficiently prove this. The result of the operations in Galicia in February and March must therefore be adjudged as the defeat of the enemy at all points. There was no lack of skill in the

design and plan of the operations nor in its execution—with the greater part of the Russian forces concentrated in western Galicia and occupied round Przemysl, an attack in flank and against a weakly held flank held every promise of success. The cause of the failure of the plan was probably a too great dissemination of force, and success would probably have been attained if the operations had been more restricted and the effort concentrated on a smaller front. The distance of the advance on the right through the Bukowina and south-eastern Galicia gave the Russians time to meet it, and to meet it at a point where re-inforcements could most speedily be thrown in. If the forces composing the right attack had been added at the outset to the Uzsok front and the Bukowina left alone, the result might have been very different.

The four months uninterrupted siege of Przemysl and its fall throw no light on the question of

Przemysl. the attack and defence of fortresses from

the technical point of view of the engineer and the artillerist. The besiegers had no siege batteries, or the ammunition for them; the cupolas and concrete of Przemysl suffered no battering ; and the ascendancy of the modern gun over modern armour and the advantages of movable and hidden emplacements over fixed and known positions were not proved as in the case of Liege and Namur—though Osowiec and its two unsuccessful bombardments appears to prove the contrary, but the circumstances are not very fully known. In regard to the strategical value of fortresses, and the claims made for them in respect of their power of delaying an enemy's advance, or of "containing" a large hostile force and rendering it immobile by withdrawing it from participation in active operations elsewhere Liege and Namur have demonstrated the very temporary nature of the delay. In the case of a chain of fortresses in a general defensive line the delay has been more appreciable, as Warsaw, Osowiec, Kovno and Grodno have shewn, but when bombardment and direct attack have not been practicable for any reason, the process

of systematically encircling each fortress successively has proved equally effective, and the delaying of the enemy has again been only one to be reckoned in days. Regarding the containment of hostile forces, the operation possesses at least equal prospects of successes if the "containing" force is employed in activity in the field in this role. It, at any rate, retains the ability to remain "in being" and of living to fight another day. If the army of 120,000 Austrians which allowed itself to be shut up in Przemysl contained an equal force of Russians, in the end it was lost to the enemy. The question of fortresses will undoubtedly be one of the earliest to engage the attention of the General Staffs of every army in the near future. If an opinion may be hazarded, it is that the "fortresses" of the present day with their girdle of forts are doomed to disappear; and that the system of fortification of a particular, or even general line of defence will where the nature of the country permits be based on the principle of the "Mahratta ditch" of Bengal for occupation by the infantry of the defence, whilst the artillery defence will be provided by ready made emplacements by the hundred all along the line, connected up by "covered" lines of rail for the transportation of guns to any required point.

(b) *The German offensive in East Prussia and Northern Poland.*

The enemy's offensive in north Poland and East Prussia, February and March 1915. which is to extend from Plock on the upper Vistula to Kovno on the Niemen, begins in February, with a very vigorous demonstration by von Mackensen immediately south of the upper Vistula against that part of the Bzura—Rawka front between Sochaczew and Skierniewice. The attack opens with a violent and concentrated bombardment on the 2nd February of the Russian positions beyond the right bank of the Rawka at Borzymow, Huinin and Vola Szydlowska. The Germans carry these three villages the next day and on the 4th that of Bednary on the railway from Skierniewice to

The German demonstration on the Bzura Rawka front, 2nd—8th February.

Warsaw. For the next three days the fighting is of the heaviest description, but on the 7th the German offensive comes to an end; north of Borzymow and still further north at Wilkowice the Russians themselves assume the offensive, and on the 8th February the fighting on this front dies away.

So vigorous was this demonstration of Mackensen on a front of less than ten miles carried out by probably not more than two Corps that, combined with the prominence given in the German communiqués to the operations, grounds were afforded for a belief that they constituted a determined effort to reach Warsaw from the west. Whether the Russian General Staff were deceived cannot be stated, but to the world at large the enemy's offensive in East Prussia which immediately followed the fighting on the Bzura front undoubtedly came as a surprise.

This offensive which starting in East Prussia next extended to the area north of the Upper Vistula, may conveniently be followed by dividing the long Plock—Kovno front into two sections; an eastern section from Kovno to Lomza, and a southern section from Ostrolenka to Plock. The operations in the eastern section will also be the clearer by sub-dividing this front from Kovno to Grodno on the Niemen line, and from Grodno to Lomza on the Bobr-Narew line.

For four months the German forces in East Prussia had been on the defensive. Composed chiefly of Landwehr and Landsturm troops, after the failure to cross the Niemen in September 1914 they had been driven back to their frontier to the line Wirballen—Grajevo. Six weeks later in the first week of November, a further retirement across their frontier to the line Stalluponen—Lyck is imposed on them, and again six weeks later, towards the end of January 1915, a still further retirement to a line running east of the large Masurian Lakes from Johannisburg in the south, through Lotzen along the Angerap river to Darkehmen and thence to Pillkallen, where it bends back to Tilsit, the Russians having invaded this northern corner also.

**The German offensive
in East Prussia Feb-
ruary-March 1915.**

If the Germans were weak, so far as numbers go the Russians were not in any very great superiority, their whole line of 80 miles from Tilsit to Johannisburg being held by only 4 corps composing their Xth Army under General Baron Sievers, and to use the words of the German official statement, with the arrival of February the time had come at last when fresh German forces were available for service in East Prussia, and a great encircling movement against the Xth Russian army could be started. The total German force has been estimated at 8 or 9 corps formed into two armies—a northern under General Von Eichorn whose command extended from Angerburg to Tilsit, and a southern under von Below whose line ran from Angerburg round the east and southern edges of Lake Spirding. The direction of the whole operations was under Von Hindenberg. The 4 corps of the Xth Russian army were the 3rd Russian Corps north of the Gumbinnen—Kovno road; the 20th Russian facing Darkehmen and Goldap; the 26th Russian opposite Lotzen, with the 3rd Siberian Corps on its left on the Lotzen—Johannisburg front.

The encircling movement planned by Hindenburg was begun in the south by the advance of Below's right wing on Johannisburg from Ortelsburg. Warding off an attack against his right flank made from the direction of Kolno, Biaka was reached on the 8th, the Russian left falling back on Grajevo and Lyck. For a week there was most stubborn fighting in the Lyck—Rajgrod—Grajevo area and to the south-west towards Kolno, and it was not until the 16th February that the Russian corps on this front (the 3rd Siberian), having successfully evaded encirclement, fell back slowly towards Osowiec and the line of the Bobr, the 26th Russian Corps on its right which had made good its retreat from Lotzen to Angustovo retiring on the same date from the latter place towards Grodno.

But further north, disaster was in the meanwhile overtaking the 20th Corps which had been fronting the Angerap with its centre at Darkehmen and its right about Gumbinnen. Eichorn's forward movement in the north started on the 8th

Defeat of the 20th Russian Corps,

February, a day later than Below's. Directing his weight from the line Gumbinnen—Spullen—Schovel against the 3rd Russian Corps on the extreme right, the latter beat a very hasty retreat on Kovno, uncovering in its precipitate retirement the right of the 20th Corps. The situation was at once seized by Eichorn. Wheeling his left round to the right their wing on the 10th February was on the line Pilkallen—Wladislalow, and crossing the Gumbinnen—Kovno road and moving South-East reached, on the 12th February, the line Wizwiny—Kalwarja—Mariampol. Here the 20th Russian Corps was not only isolated, but its direct line of retreat on Olita was cut off, and attacked also from the west it was driven back between Suwalki and Simno into the forests and marshes west of the Niemen. Ten days later (22nd February) the surviving remnants consisting of the 29th Division emerged from the Angustowo forest at Sopokcire 15 miles north-west of Grodno, the corps having lost three-quarters of its effective strength and all its guns.

The farther operations of Eichorn's Army may conveniently be considered here. On the 24th February his right reached the Niemen below Grodno at Goja and Sventsiansk, where a small detachment succeeded in crossing the river but only to be thrown back next day, and from now onwards his attitude in the line Sopokcine—Kopciovo—Soreje—Simno and farther north towards Kovno was entirely defensive. The Russians in this front began to take the offensive, and on the 26th February were attacking his right from Grodno and his centre at Simno and Soreje from Olita. Their progress was slow and not very marked except towards Angustovo, where the enemy were on the 6th March driven back to Lipsk and beyond the Jastrzenka, but only to advance again on Lipsk a week later. Farther north, Kopciovo, Sejny where the Germans retired on the 18th March, Simno,

18th March.

Mariampol and Pilwizki, mark the limit of the Russian advance in this region,

and a line which was to remain immobile for more than four months, especially that portion which immediately faced Grodno. The northern frontier of East Prussia, from Jurburg to Tilsit merits only a passing reference. Only weak detachments faced each other on this front. On the 18th February the Germans had occupied Tauroggen, and exactly a month later the Russians made a weak attack against this place and Langszargen, and a raid in the extreme north on Memel, but these were incidents of but little importance.

We left von Below on the 16th February on the Below's operations against Osowiec. Szezuczyn—Grajevo—Rajgrod line advancing on Osowiec and the Bobr. Grajevo is only 15 miles from Osowiec but the Germans did not arrive before the latter place until the 21st February after meeting with opposition on the Grajevo road and also on the right flank south of Kolno. North of Osowiec Below's left reached the Bobr at Stabiu while his right was at Jedwabno. As in the previous October, and as again in the following August, Osowiec and the line of the Bobr was not to be taken by direct attack and Below contented himself with entrenching his positions on the marshy banks of the river and with bombarding Osowiec again with heavy artillery. Continual bombardments, and occasionally desultory engagements are all the *communiques* have to report on this front for the next three weeks up to the 16th March when there is no farther mention of Osowiec. If, however, Below was unable to cross the Bobr, the Russians were not able to drive him from his positions, and the Bobr remains for six months the actual front of the Germans in this area except his extreme right which has been forced back a little from Jedwabno towards Kolno.

It will be remembered that in the middle of January, as the result of their advance to Plock, The German offensive in northern Poland February & March 1915 the Russian line north of the upper Vistula ran from the Skrwa river facing west to Radzanow, Mlawa and Myszyniec along the southern

borders of East Prussia. On the same date that von Below began his movement against Johannisburg (7th February), the enemy set on foot in north Poland operations which were to extend from the Skrwa in the west to the Omulew river in the east on a front of 80 miles, by crossing the Skrwa. On the 12th February the Germans were in Sierpc, and by the 16th the weak Russian forces had fallen back before the five divisions opposed to them on to the Plock—Raciaz line, their extreme left retiring farther towards Wyszogrod and Plonsk two days later. But all this was but demonstration in force—Hindenburg's real thrust was to be directed against the Russian centre and right on the Mlawa—Chorzele—Myszyniec front. On the 18th February the concentration of considerable forces of the enemy estimated at 2 Corps was reported as having taken place between Soldau and Willenberg, and on the 21st the Germans began their forward movement on Mlawa and from Chorzele. There was heavy fighting north of Prasnysz on the 22nd and 23rd before the enemy on the 24th entered Prasnysz which was only held by one Russian brigade, and pushed on through, and on both sides of this town, to Krasnosielc, Szuki and Lysakowo on the 25th. But Russian re-inforcements were hastening from the south and from Ostrolenka and attacked in flank at Kvasnocielce the enemy fell back, our allies re-capturing

Prasnysz on the 26th February. On the **Prasnysz 24th 27th February.** night of the 26th—27th a temporary foot-

in the town was regained by the Germans but next day their defeat was complete and they were retreating to their frontier all along their northern line. Their retreat was not, however, as precipitate as was first announced, for on the 3rd March in spite of the vigour of the Russian offensive, they were no farther back than the line Mlawa—Kerzee on the Omulew, in the valley of which stream and in that of the Orzec the fighting was particularly obstinate. On the 8th March the enemy was reported as again bringing great forces into line south of Chorzele,

and assuming the offensive in his turn had advanced by the 11th to within 3 miles again of Prasnysz, but this is the limit of his counter-advance. In the next week he is slowly but steadily pushed back towards his frontier, and by the 20th March, on which date active operations in this theatre ceased, his northern line runs south of Mlawa, Chorzele and Myszyniec until it joins up south of Kolno with his forces on the Osowiec front. On his extreme right his flank has similarly been pushed back to the line Rodzanovo—Dobrin—Radzanow—Mlawa, the only ground gained by him in this region being that which lies between this line and the Skrwa.

The retirement of the Russian Xth Army from East Prussia in the face of overwhelming superiority of numbers was inevitable; but the manner in which they rallied their forces, the rapidity with which they brought up re-inforcements and their assumption of a counter offensive are notable features of the Russian operations. In regard to the operations from the German side, it is generally held that Hindenburg's main object was a determined attempt at the capture of Warsaw from the north. If this was his design its execution appears to have been lacking in vigour and resolution, and especially in co-ordinated action. The thrust southward against the Narew and the advance on Prasnysz appears, in particular a very disjointed movement, starting as it did a fortnight after Below's and Eihorn's advance eastward. Having pushed the Russians back to the Niemen and the Bobr, both the bringing up of siege artillery against Osowiec and the advance against the Narew front look very like afterthoughts. But Hindenburg's real aim and object must for some time to come remain a matter of conjecture. What the enemy did secure, in addition to the recovery of his own territory, was a knowledge of the difficulties which the Niemen and the Bobr presented against direct attack, information to be subsequently turned to good account by them five months later.

On the Western front, the French local offensives at **The Western Front.** Perthes near Rheims, and at Regnieville and Fey-en-Haye towards Pont-a-Mousson, and the re-capture by the British of Neuve Chapelle are the only noteworthy events in the months of February and March. The French effort at Perthes was the more prolonged one and probably carried out in the greater strength. At Neuve Chapelle after the first days operations, the British effort was chiefly directed to repelling the enemy's vigorous counter-attacks. In neither of these cases, nor in the Pont-a-Mousson region has there been any appreciable advance, and in the west there are no signs of a general offensive whether on the part of the allies or on that of the Germans.

In the beginning of February the Turks made their abortive attack on the Suez Canal, and three weeks later British and French ships bombarded the forts in the Dardanelles.

VI

The Russian Advance in the Carpathians.

MAP VII.

The Austro-German offensive in Galicia, which in **March—April 1915.** February and March had brought their armies across the Carpathians from the Lupkow Pass to the Bukowina, had scarcely ceased before the Russians began their counter-offensive against the enemy's centre and left south of Przemysl. The object of our allies was the consolidation of their positions about the Dukla Pass and the recovery of the Lupkow, and if possible the Uzsok also. The direct attack of the Uzsok and its three neighbouring passes and of the Turka—Wyskow front the Russians probably decided would be as difficult an undertaking for them, as the breaking of this front had been found to be by the enemy for the past two months. If our allies, could secure a foothold on the flank of this front their position there when the time came

for a general advance across the Carpathians and for the invasion of Hungary, would threaten the enemy's communications with the Uzsok and not only serve as a pivot for the general advance but would also threaten the southern flank of the enemy's positions on the Dunajec and Biala front.

The Russian offensive began on the 19th March by an advance from the Polianka Pass and **The Dukla Sector.** Konieczna towards Zboro and Cigielka north of Bartfeld and Tarno, and from Szvidnik towards Stropko. The Austrian resistance was very determined. The Russians do not appear to have been in very great strength along this 30 miles of front and their advance was slow, Cigielka not being taken until the 2nd April and Stropko on the 4th. Two days later they extended their left towards Puczak and Mezo Laborcz, but the line Cigielka—Zboro—Stropko—Mezo Laborcz marks the limit in this sector, in which the operations were only of a subsidiary nature—an auxiliary attack, as the Russian General-Staff described it; to the main operations between the Lupkow and the Uzsok passes.

The front against which the Russian main attack was delivered was that attained on the 5th March by the Austro-German left, or **The Lupkow—Uzsok front, 23rd Mar—23rd April.** Western, group of the armies which had invaded Galicia from the south in January. Its front extended from Baligrod to Lutowiska, with the left flank thrown back on to the crest of the Carpathians west of the Lupkow Pass and covering that pass. Its right connected towards Turka with the enemy's central group on the Turka—Wyszkow line. The Russian advance commenced on the 23rd March **23rd March.** (the day after the fall of Przemysl), the weight of their attack being delivered against the flanks of the position. The enemy's defence was stubborn and it required nearly a week of equally determined attacks before he was dislodged, but

the seizure of the crests west of the Lupkow on the 27th March on his left, and the turning of his right at Dvernik on the 29th, forced him to fall back gradually to the line Smolnik—Cisna—Kaluica—Nasieczna on the higher slopes. On the 31st the Austrian right was broken between Kalnica and Nasieczna, and next day their left was turned by the capture of Smolnik and Vola Michova, and of the Lupkow Pass, the Russian

1st April. right even reaching Virava on the southern slopes. But the Austrians were still holding

on at Cisna and Kalnica covering the Rostoki Pass, and it was not until the 4th April that this pass was in the hands of the Russians. Our allies had a temporary set back of a few days on their right owing to the enemy being re-inforced in that direction, and on the 6th April were forced back from Virava to the Lupkow pass, but three days later they have resumed their offensive. On the 11th Telepovce is in their possession, and on the 15th Zuella is reached, their centre on the same date capturing

19th April. Polena and on the 19th Runyina, and the Lupkow and Rostoki passes are firmly

in their hands. The progress of their left is not, however so marked after successively turning the enemy's right in the early part of the operations, the advance of this wing through Ustrzyki towards the Uzsok Pass meets with determined opposition, which is only to be expected knowing the value set by the enemy on the possession of this pass. Volosate and Lubnia on the crest west of the pass—the latter village

21st April. being only taken on the 21st April—and

Beniova and Vysocko Nizne north and south of it are the farthest points reached in this direction, and when the Russian offensive ceases all along the line the Uzsok Pass remains in the enemy's hands.

So ended as hard a month of fighting as any part of the long front had seen at any time during the past nine months of the War—a month of mountain warfare waged in snow. If the number of prisoners be a criterion of suc-

cess, the Russian captures amount to 70,000. Measured in miles the gain of ground has not been great, but two important passes have been re-taken and the position at the Dukla consolidated. If a general offensive in Hungary in the near future had been contemplated by our allies the possession of these passes would have been of the greatest strategical value. Their possession was of equal tactical value in protecting the southern flank of the Dunajec—Biala front against attack from the south. This front was, however, to be assailed by the enemy in another manner, and as matters turned out the Russian troops in these passes found themselves in a very precarious situation when in a week's time, the Dunajec—Biala line was broken through in the rear of these troops many of whom were being cut off.

On the rest of the long front there has been no change in the opposing lines—except at one far end. On the Turka—Wyszkow front to the East the enemy has perhaps been more active than elsewhere, and there has been a certain amount of activity on both sides farther east on the Dniester round Zaleszczyki, and on the Pruth about Czernowitz. The Austrian raid against Chotin on the Dniester across the Russian frontier on the 2nd April was of no military im-

The German advance in Courland, 28th April. portance, but in the extreme North, in the last days of the month there is a development which almost passes unnoticed at the time, or if noticed is regarded either as a raid, or only an effort to divert attention from the South. This German expedition, as it may be termed, was not on any large scale and cavalry was the chief arm employed. Advancing from the Taurogen—Memel front on the 28th April in the direction of Mitau, and on the general line Libau—Shavle, Libau was reached without much opposition on the 8th May and the enemy's central column got to within 30 miles of Mitau, but their right and centre were forced to retreat almost at once, and by the middle of May the Germans had been forced back towards their frontier some distance behind the

line Libau—Shavle, retaining possession, however, of Libau. In the next two months there will be frequent reports of fighting on the Dubissa and Windawa rivers, and of advances against Shavle and Kurshany and other localities in this new theatre, but the advance in force on Mitan and Riga will not take place until the middle of July when Hindenburg sets in motion all his armies from Warsaw to Libau.

On the Western front the French have in April been active on the northern and southern sides of the St. Mihiel triangle on the Meuse in the Verdun—Pont-a-Mousson region; and towards the end of April, the second battle of Ypres is begun in Flanders, a battle which introduces the use of asphyxiating gases as a new weapon of warfare.

The rapidity of the Russian mobilization, the immediate offensive of our allies, the invasion of the territories of both the Germanic Powers, the crushing defeats successively inflicted on one of these Powers, and the relentless advance in the latter's territory, were the outstanding features of the initial phase of the War on the Eastern Front. At a blow were shattered any hopes the two allies may have entertained of making the line of the Bug, or failing that the line of the Vistula as their defensive front pending the decision of the campaign in the west. The Russian failure to maintain the hold secured in East Prussia was disquieting and to be deplored—what it meant and the retention even of the line of the Alles river was scarcely realized at the time. This line would at any rate have formed a straight prolongation of the ultimate front in Poland, which instead remained always thrown back, forming a salient at the most dangerous point north of Warsaw. The political and moral advantages that would have accrued by the retention of at least half of the province of East Prussia were scarcely less important.

Failing the retention of any of the enemy's territory in this theatre it was, however, something that he was securely held on this frontier. When, in a short while, it was

hoped, the advance through Poland towards the frontiers of Posen and Silesia began, the forces on the borders of East Prussia would fall into line and be again invading that province. Only when the war has reached its third month of duration; when the broad space between the Russian northern and southern armies is still unfilled; when there is no indication yet of its being filled and alive with the forward movement of other Russian Armies; when instead, the enemy in the middle of this third month is found at one bound on the banks of the Vistula and at the gates of Warsaw and Ivangorod; when the northern and southern armies are called upon to assist such forces as can be hurriedly sent forward from the interior to repel the invader then only perhaps is it realized that the mobilization of the Russian armies has been incomplete, and that as yet they have succeeded in assembling only a portion of their forces.

Hopes are, however, again raised when the invaders are not only followed up right to their own frontiers, but Silesia itself is seriously menaced with invasion in its turn. But the inability to do more than concentrate the greater part of their new forces in this South-Western corner of Poland leaves a gap still open farther north, of which the enemy is not slow to take advantage, and the fourth month of the War sees Poland again invaded, and the Russians unable to effect more than stay the invasion, on a line in the heart of their own outlying territory. There is compensation in the fresh advance from the San on which our allies had been forced to fall back in the previous month, an advance which carries them nearer to Cracow, but the whole situation generally indicates that the strategical initiative has by now passed out of the heads of our allies. If, however, the resumption of a general Russian offensive is indefinitely postponed, there is at any rate no lack of will or power to stave off every offensive movement of the enemy. After a period of two months in which major operations come for a

time to a standstill (a period in which our allies do not fail to take advantage of every offensive opportunity that presents itself advancing their lines on both flanks in the Bukowina and in East Prussia), the determined efforts of the enemy in the seventh and eighth months of the war to thrust back their flanks and so turn the impregnable front of the Vistula are not only met and arrested with equal resolution; but the vigorous and successful counter offensive in the Western Carpathians, which immediately follows the repulse of the enemy, demonstrates that after nine months of war, and given anything approaching equal conditions, our allies capability for the offensive is in no way impaired and that the Russian armies have still to be seriously reckoned with—so seriously that it is against them that the enemy's great offensive is now to be entirely directed.

Unpreparedness and tardy mobilization as compared with the enemy's readiness were not the only difficulties which the Russians had to face. Throughout their operations, from their first step in advance, they have been confronted with the serious disadvantage of a salient frontier line, of strategic encirclement on three sides, and of divergent strategical objectives. The conquest and occupation of Galicia only throws back the frontier line on this side a few miles, and the Austrian menace to their southern flank remains as influential and as constant as ever. And when the selection of one or other of their two enemies as the first objective is the question for decision—is the goal to be Berlin or Vienna—the difficulties of our allies seem to be well nigh insuperable. Against whichever foe the main pressure may be brought to bear, the other remains on the flank. Very different are the conditions in the west. Here the flanks of the Allies are secure, and if those of the enemy are equally so, nevertheless it is the enemy who is ringed in, and the Allies have as their sole objective the one ringed—in foe to whose more effective envelopment, or whose defeat by other methods they can devote their whole undivided attention.

If the Russians have in nine long months failed to reach any goal and to encompass the enemy's defeat, no greater achievement can be claimed for the efforts of the Western allies—nor, for that matter, for the efforts of the common enemy. And if the question is asked: what have the Russians so far actually done for and in the common cause? The answer must be given in the form of counter-questions. What would have been the situation on the western front if the Russians had not assumed such offensive as they found possible, invading both enemy's territories defeating and routing one of them, and bringing home sharply to both the fact that Russia was not a force whose existence could be temporarily put out of sight until the work in the west was accomplished? As time went on what would have been the situation of the western Allies, if the Ally in the east had contented himself with the taking up of a purely passive line of defence behind which to complete leisurely his preparations and the organization of his armies, instead of, at all costs and in spite of incomplete preparedness, pursuing and continuing a policy which surely and steadily occupied the whole attention of one, and certainly attracted half the exertions of the other adversary? Such questions and their answers may, possibly, be purely conjectural; but they merit and will bear consideration.

Whether, when deciding to adopt a defensive policy on the Eastern Front until the French were settled with in the West, the Germans intended a purely passive defence of, at any rate their own frontiers, cannot be definitely stated. The leaving of only five active corps along the whole of their Eastern frontiers and entrusting their defence chiefly to Landwehr and Landsturm troops affords grounds for the supposition. If it be a correct one, the vigorous initial onslaught of the Russians speedily demonstrated that such a defence was not likely to prove a very effective method of protecting German territory. The offensive and always the offensive, whether strategical or tactical, is a precept

inculcated by at least two generations of German military thought, and from the moment that von Hindenburg assumes command it is put into practice and remains the guiding principle of the operations on the Eastern Front from first to last. No sooner has the principle been applied tactically by this commander in East Prussia, and the Russian invaders thrown back in the second month of the war to the Niemen, than the first invasion of Poland is launched by him—perhaps a little prematurely, and with a little more preparation and the use of a little more force than was actually employed, Warsaw and the Vistula which were reached without any opposition might have been retained at the first attempt, and there would have been no occasion for a second invasion of Poland. The enemy's assertion that the first invasion was purely a reconnaissance in force has been noted. Invasion or reconnaissance, there is no doubt of the offensive nature of the movement nor of the determination to return. The retreating Germans scarcely arrive back at their own frontier when the second invasion of Poland is set on foot in the fourth month of the War, and although Warsaw and the Vistula are not again reached, the result obtained is the establishment of a defensive line far distant from the eastern frontier of Germany, and the removal for an indefinite time of the threat of any invasion of that portion of the Empire.

Wherever and whenever circumstances permit, the principle is applied. In the fifth month of the war there is no pause before Mackensen after throwing back the Russians from Lodz causes the force in his front to fall back still farther towards Warsaw to the Bzura—Rawka front, this force taking back along with it those farther south who have been threatening Silesia. The principle has by now been also thoroughly inculcated on the Austrians who, in this same month, again attack the enemy in their front though on this occasion in flank as well as in front. The attack is beaten back, but their offensive results in a very appreciable retirement of the Russian force before Cracow.

There is a pause of three weeks in the sixth month of the War, but before the month closes, the great offensive across the Carpathians is launched. It is immediately followed by the offensive on an equally large scale in East Prussia and Northern Poland, and for the next two months determined efforts, in Galicia at any rate, are made to break the resistance of our Allies on the two fronts. These efforts both fail (though that in the northern theatre is successful in liberating East Prussia from the hands of the enemy), they have been vigorous and costly and a little time is required to recover breath, but not very much. Only five short weeks—the greater part of which is taken up by a considerable number of Austro-German troops being occupied in repelling the irritating Russian counter-offensive in the Western Carpathians—and all the enemy's preparations have been completed for the great offensive in the east which the tenth month of the war is to see launched and relentlessly pursued.

VII.

The Russian Retreat in Galicia.

MAP VIII.

From their first assumption of the offensive in the May-July 1915. second month of the war the enemy had put into practice strategically the tactical maxim of Napoleon of tapping and feeling along the whole front for a suitable opening. Every part of the long Russian line had been tried in turn, and many parts more than once. Two advances have been noted against the Niemen, Bobr and Narew fronts; two or three, against the Bzura—Rawka line immediately west of Warsaw; one against the neighbouring front to the south which later became the line of the Nida; two against the Russian front in western Galicia facing Cracow, both being combined with an advance over the Western Carpathians; and finally the great advance into Galicia from Hungary across the Central and Eastern Carpathians. The Nida (or Middle Vistula), and

the Southern Galician fronts had only been once attempted. In the case of the Vistula between Ivangorod and Sandomir, the reason is to be found in the absence of sufficient means of supply for any very large force or for operations on any great scale in that region, only one line of railway, and that a very long line, serving this front. The Central and Eastern Carpathians had been the scene of the enemy's last great offensive in the southern theatre which as late as March had scarcely been brought to an unsuccessful conclusion. This offensive had succeeded in forcing the range and in obtaining a foothold in Southern Galicia, but the enemy's most determined efforts for two months and more to advance beyond a certain point had all broken down. While still making the Russian armies in Galicia their first general objective it was the comparatively small force on the Danajec—Biala front in the west which was selected as the special point against which to make their next and greatest effort and, instead of further attempts against the flanks to pierce the line at this point.

The reasons and conjectures advanced for the selection again of Galicia have been many and various, political and military. The removal of the menace of invasion of either Silesia or Hungary, or of both; the liberation of Galicia from the hands of the invader; the separation of the Russian armies in Galicia from those in Poland; the shortening of the line by forming a chord across the great arc which extended from the south-eastern corner of East Prussia to Czernowitz in the Bukowina, round by north and west of Warsaw, south to Bartfeld in the Carpathians, and thence eastward to the Rumanian frontier—a contraction which it was calculated would liberate for employment elsewhere at least one-third of the two million Austro-German troops estimated as holding this arc; these were the several aims and objects of the enemy that have been put forward. Possibly, Von Falkenhayn, the new Chief of the German Great General Staff who had succeeded Von Moltke, had them all in view.

When commenting on the enemy's last offensive operations in East Prussia and in the Carpathian theatre it was suggested that his failure after attaining a certain measure of success may have been due, either to insufficiency, or to too great a dispersion of force. No criticism of this nature is possible in the case of the operations now to be considered. Of the two million Austro-Germans on the whole Eastern Front one half was on the Galician borders, and on this front of some 270 miles half a million men were massed on the 50 miles of the Dunajee-Biala line—10,000 men per mile of front, a proportion which was exceeded again on the 20 miles of Mackensen's front which was selected for the decisive assault. Against this vast concentration of force the three Russian armies in Galicia could only bring, at the most favourable computation, 14 corps in all or some 560,000 men, of which only some 200,000 were on the Dunajec-Biala line. It has been admitted that our Allies knew weeks beforehand of the concentration that was being effected about Cracow; it is now equally well known that they were unable to strengthen this front without dangerously denuding the rest of their long line. The strengths of the opposing forces above given are only estimates and computations; the question of strengths is a most important one—the means by which a given operation was carried out is all essential matter for the military student—but this information will not be obtainable for a long time to come. It is sufficient to say that in the forthcoming operations in Galicia the enemy had a superiority of at least two to one in men while their superiority in heavy artillery, and in munitions was incomparably greater. The inferiority of our allies in this matter was no after thought put forward later as an excuse; it was beginning to be known to the whole world so early as January, and had been a matter of concern since the entry of Turkey into the war and the closing of the Dardanelles.

The distribution of the Austro-German armies was as follows:—

Vistula-Tuchow.—IVth Austro-Hungarian Army (Archduke Joseph Ferdinand).

Tuchow-Carpathians.—XIth German Army (Von Mackensen.)

Dukla Sector.—IIIrd Austro-Hungarian Army (Borovjevic Von Bojna).

Lupkow Sector.—IIInd Austro-Hungarian Army (Boehm-Ermolli).

Uzsok Sector.—Southern Army (Von Lissingen).

Dniester Sector.—Bukowina Army (Von Pflanzer).

Facing them were:—

Vistula-Carpathians.—IIIrd Russian Army.

(Dunajec-Biala line.)

Dukla and Lupkow Sectors.—VIIIth Russian Army.

Uzsok and Dniester Sectors.—IXth Russian Army.

The three armies in Galicia were under the chief command of General Ivanoff.

The Retreat from Tarnow to Przemysl, 2nd to 14th May 1915.

Preceded by a three days general bombardment early in the morning of the 2nd May the hurricane of artillery fire which has now become historic opened

2nd May. along the whole line from the Vistula to Konieczna continuing without cessation for four hours. The first of the enemy's infantry to break through the defences was in the part between the Vistula and Tarnow, and the Dunajec was crossed at Otfinow and a foothold obtained on its eastern bank. But the archduke's right in the Dunajec-Biala triangle facing Tarnow and Tuchow was not so successful, and the advance of his left on the Dunajec was held up for four days till his right was able to move forward. This was not till the 5th May when the enemy at last succeeded in crossing the Biala, at Tuchow, while it was not until the 6th that Tarnow was evacuated by the Russians. Mackensen, however, on his front of 25 miles from Ciezkowice

wice to Konieczna was immediately successful; and the centre of this line at Gorlice was pierced early in the day, and the Russians in this sector had by night fall of the 2nd been forced back some two miles to their second line of defences. For the next six days the left wing of the IIIrd Russian Army was persistently attacked by Mackensen and forced daily to give ground, except its right flank which connected with its right wing at Tuchow on which point the Russian left wing pivoted in its retreat. With his centre directed on Jaslo and his right on Zmigrod, on the 5th May Mackensen had reached the line Tuchow—Jaslo—Dukla, his extreme right at Tylava at the mouth of the Dukla pass seriously threatening the retreat of the right wing of the VIIIth Russian Army South of the Dukla between Zboro and Mezo Laborc, against which Von Bojna had begun on this date his advance from Bartfeld and Stropko. For the next three days in spite of the desparate efforts of the Russian rear-guards the advance of Mackensen's "Phalanx" was resistless. On the 7th having crossed the upper Visloka on the 5th he reached the upper Vislok on the line Frystak—Krosno—Rymanow. On the 8th

8th-10th May.

May, six days after the opening of the enemy's offensive, our allies were able to rally temporarily and straighten out their line, the right and centre of the IIIrn Army which had fallen back slowly from the Dunajec and Tarnow—Tuchow front, coming now into line as also the right wing of the Russian VIIIth Army which had been holding the Zboro—Mezo Labor line south of the Dukla. This force attacked in front by Von Bojna on the 5th with its line of retreat on Sanok continually menaced by Mackensen's right wing which had advanced from Konieczna to Tylava had experienced considerable difficulty in extricating itself. On the 8th May the enemy's line was :—

Archduke Joseph Ferdinand: Szcuzin—Dembica—Stryzow
Von Mackensen: Stryzow—Brzozow—Besko, Von Bojna:
Besko—Komancza.

There was heavy fighting on it on the 8th and 9th, but on the latter date Boehm—Ermolli's Army from the Lupkow—Uzsok front (it will be remembered that in April he had been driven over the crest of the Carpathians to the line Virava—Polena—Volosate), was making its presence felt South of Sanok advancing on Balagrod and Lutovista. With their centre at the same-time attacked in force between Dembica and Brzozow the retreat was continued. On the 11th the Russian line ran from the Vistula down the Visloka to Mielec and thence to Sendziszow. Here it formed a re-entrant from Sendziszow through Rzeszow to Dynow on the upper San. From Dynow I ran along the San to Sanok where I bent eastward and facing south. The retirement continued again during the next three days, nothing in the nature of a stand being made but every yard of the enemy's advance being stubbornly contested, until on the 14th May the line of the lower San was reached from near Sandomir to below Jaroslau, being however bent back in the north on the line Tarnobrzeg—Rozvadow in the apex of the triangle formed here by the Vistula and the San. The Archduke's left was at the former place and his right near Sieniova; Mackensen's front was from Sieniova to Radymno between Jaroslau and Przemysl; Von Bojna was before the western forts of Przemysl, while south of that place was Boehm—Ermolli on the line Dobromil—Sambor.

North of the Vistula the retreat of the IIIrd Army from the Dunajec front had forced upon the Russians a corresponding withdrawal of their troops holding the line of the Uida. Pivoting on Tomaszow on the Pilica, these began their retirement on the 11th May, falling slowly back through Kielce on the general line Kielce—Opatow, and connecting up on the 14th with the armies in Galicia at Tarnobrzeg.

In the central Carpathians on the famous Turka—Wyszow South-eastern Gall. cla. 8th-14th May. front, where in February and March and on into April, the Russians had successfully withstood every attempt of the enemy to break through,

there was no movement until the 12th May when Lissingen at last began his advance on Stryj and Kalusz against the line of the upper Dniester south of Lemberg. His advance was slow in its initial stages, his right in von Pflanzer's direction meeting especially with considerable resistance; on the 14th May his line was echeloned some distance in rear of that of Boehm—Ermolli and Lissingen's Army does not begin to make its influence felt until the second stage of the Russian retreat. Away, however, in the South-eastern corner of Galicia, whilst elsewhere in this province their armies were falling back, on the lower Dniester* the Russians on the 8th May began an offensive which succeeded in driving the enemy in this area back to the Pruth. From his line which on the 8th May ran from Nadworna through Ottynio to Niezwiska on the Dniester, and thence along the river to Zaleszczyki, and from there round to Czernowitz, von Pflanzer was in six days forced back along his whole front to the line Delatyn—Kolomea—Sniatyu—Czernowitz, and was there held fast until, three weeks later, von Lissingen's advance and the consequent exposure of their right flank at Nadworna led to the Russians falling back again to the Dniester. The forces engaged were not very great, not more than two corps on either side, and the Russian operations in this area had but little influence on those in Western and Central Galicia in staying the enemy's general advance; but General Ivanoff had the satisfaction of knowing that the extreme left flank of his long line was secure and his communications guarded; and once again it was proved that, given equal conditions, our allies were capable of assuming the offensive when required.

The Russian Stand on the San and the Dniester.

The second stage of the retreat is the determined stand by
(14th May—10th June 1915.) our allies on the river lines of the San and the Dniester north and south of Przemysl. For nearly a month the enemy is kept at bay; the persistent

*The 200 miles of its course in Galicia forms in reality the "Upper" Dniester the real "lower" Dniester not being reached for another 200 miles.

attempts to encircle Przemysl are not only all warded off, but on several occasions the Russians assume the offensive with distinctly important local results ; the evacuation of Przemysl is carried out leisurely, and it is not until a week after its abandonment, that the retreat is resumed. The enemy's chief activities in this period of a month are the attempts of Boehm—Ermolli and Mackensen to close round Przemysl on the East from the South and North respectively; and of Lissingen to cross the Dniester on Boehm—Ermolli's right to cut the Russian communications with Lemberg. Von Bojna's army which is investing Przemysl on the west is waiting for the repair of the railways (thoroughly destroyed by the Russians in their retreat from Tarnow), to bring up his heavy guns and munitions, and will begin to be active again only towards the end of May. The Archduke Joseph Ferdinand on Mackensen's left and whose own left rests on the Vistula in the apex of the Vistula—San triangle, is effectively held and more than once finds himself hard pressed. On the Pruth on the extreme right of the enemy's line, Pflanzer is able in this period to advance at last, to be however, also effectively checked on reaching the Dniester.

Boehm—Ermolli, on the Dobromil—Sambor line, continued his advance northward, with Medyka and Mosciska on the Przemysl—Lemberg railway as his objectives, on the 15th May capturing Sambor on that date, the Russians retiring to the line Hussakow—Krukienice—Rudki, a line running due East and West and resting, on its right, on the southern defences of Przemysl. On the 16th he attacked Hussakow and for several successive days the fighting here was "desperate," our Allies only giving ground on the 21st and withdrawing their right to five or six miles south of Medyka. Against this line all Boehm—Ermolli's further efforts were of no avail, on the 22nd and 23rd, indeed, the Russians were vigourously assailing his right and centre and it was not until after the evacuation of Przemysl that the Russians, withdrew their right to Mosciska

which we find the enemy attacking so late as the 13th June.

With the same object and objective in view—the railway Mackensen. immediately east of Przemysl—Mackensen crossed the San at Jaroslav on the 16th May, and two days later at Sieniava. It was a week before he was able to effect a passage higher up at Radymno on the 25th and by pontoon bridges between this place and Jaroslav, and a distance of 10 miles on the eastern bank of the San was the farthest reached by him. On this bank his line formed an arc from Sieniava on the north, along the Lubaczowka stream to Zapalow thence to Naklo a few miles north of Medyka. All his efforts to close the neck of the bottle on his right proved fruitless, while on his left his position was scarcely secure, as on the 27th May the Russians re-captured Sieniava.

The only successes to be claimed by the Archduke's Archduke Joseph Army were the repulse of two very Ferdinand. vigourous offensive movements directed against his front. The first (21st—24th May) launched from the Sandomir threw back for some five miles to the south his already refused left between Tarnobrzeg and Rozvadow; while the second (2nd—4th June) caused a still farther withdrawal of this flank. These counter-offensives of the Russians may, possibly, have had no pronounced effect on the general operations, but they at any rate demonstrated that the *moral* of our Allies was but little impaired.

We left Lissingen's army on the 14th May echeloned in Boehm—Ermilli's right rear and advancing Lissingen. North—East towards the Dniester with his left on Drohobycz and his right heading for Kalusz. The advance of his centre and left was not greatly impeded at first and it was not until reaching the line Drohobycz—Stryj—Bolechow on the 19th May that it met with serious opposition and was arrested for a week. Determined attacks against Stryj on the 20th and 21st were repulsed with heavy losses, and for the next [four] days Lissingen awaited the arrival of his

heavy artillery. On the 25th he again attacked Stryj in force but it was not until the 31st May that he finally succeeded in capturing it and was able to continue his advance, on the 2nd June, against Mikolajow and Zydaczow. But the attacks against these two bridgeheads along the only two roads in the otherwise roadless and impassable marshes of this region, were more of the nature of a demonstration. It was against Zuravno and Sivka that the real attack was directed from Bolechow and Kalusz where a crossing was effected on the 6th June on a front of 13 miles and the Chodorow—Halicz railway reached next day. On the 8th and 9th the Russians, however, assumed a very vigorous counter-offensive driving him on the 10th back across the Dniester. But this local success was only a temporary one, for next day Lissingen returned to the attack, this time succeeding in securing a permanent though small foothold on the northern bank. Here his attempts to advance farther proved unavailing for nearly another fortnight until on the arrival of Boehm—Ermolli and Mackensen before Lemberg the Russians fell back farther eastward on the 22nd June.

Lissingen's operations and the determined Russian opposition scarcely received at the time the consideration they deserved, interest being chiefly centred round Przemysl. Yet these operations undoubtedly effected those of Mackensen and Boehm—Ermolli. Had Lissingen after capturing Stryj on the 31st May been able to cross the Dniester at once the Russian centre only a few miles east of Przemysl at Mosciska would, inevitably, have been forced to withdraw and the advance of Boehm—Ermolli's and Mackensen's Armies would not have found itself still arrested on that front so late as the 10th June.

Since the 14th May after his retreat from the Dniester, von Pflanzer had been holding on to the line of the Pruth. On the 5th June the Russians were still attacking him here between

Delatyn and Kolomea, but circumstances were now to lead to an immediate and rapid retirement of our allies, Lissingen's progress, having exposed their right and Pflanzer having in addition received considerable reinforcements. On the 6th Nadworna was evacuated and Obertyn and Horodenka on the 8th; on the 11th Pflanzer's left wing was approaching Tlumacz which was seized on the 12th as also Niezwiska and Zaleszczyki, some of the Russian troops retiring across their frontier into Bessarabia. Three days later Pflanzer's left captured Nizniow, but the Dniester between Nizniow and Zaleszczyki marks the limit of his progress, and many months later he will still be found on this line unable to cross the Dniester or to turn the extreme southern end of the Russian line.

Von Bojna's operations on the western side of Przemysl

Von Bojna. can be disposed of very briefly. Not until the arrival of his siege artillery in the end of May was he in a position to attack the Western defences but on the 30th the bombardment of the forts was opened; the next three days they were attacked methodically in sectors; and late on the 2nd June the Russians, who had by this time leisurely removed every thing valuable or useful, withdrew the garrisons of the forts, the enemy entering Przemysl on the morning of the 3rd June.

Another week however was to elapse before the Russians

Evacuation of Przemysl, 3rd June 1915. actually fell back from Przemysl. Falling back and closing in their forces north and south of the Lemberg railway on Mosciska, they were still holding the line of the Visznia stream on the 10th June, while from Sieniava down to its confluence with the Vistula the San still formed the right of the line in Galicia.

MAP VIII.

From Przemysl to the Bug.

To the Austro-German armies in the immediate neighbourhood of Przemysl fell the chief role in the next stage of the Russian retreat which is to carry some of the forces of

our allies eastwards to Lemberg and beyond, and some northwards across the northern frontier of Galicia into their own country. Due east of Przemysl was Von Bojna's IIIrd Austro-Hungarian Army which previously had the task of investing Przemysl on the West. It now fills the gap south of Mosciska and in the triangle formed by the Visznia and the San, that existed between the armies of Mackensen and Boehm—Ermolli, an opening which these two commanders had been unsuccessfully attempting to stop for nearly three weeks. Boehm—Ermolli's front ran through Krukienice to Rudki on the Dniester; Mackensen's from the Visznia from a point east of Radymno through Radava to Sieniava where he connected with the Archduke's right, the latter's front running as before along the San with his left still in the corner of the Vistula—San triangle. On the resumption of the enemy's advance the Archduke had the task of protecting Mackenseu's left flank in the latter's march eastward. Whilst facing north and those forces of our allies which fell back in that direction, he also marched eastwards until the time arrived for his whole line to advance across the northern frontier. It will be noted that between Sieniova and Rudki a very great mass of troops was concentrated, as dense a mass, if not more so, than the initial concentration on the Dunajec—Biala line. The ultimate retirement of our Allies was therefore a foregone conclusion but the retirement was by no means a hurried one. On the 5th June the enemy resumed his attack but it will take him 17 days to cover the 50 miles between Mosciska and Lemberg, and ten days more before he reaches the line of the Bug and Zlota Lipa rivers.

On the 5th June, two days after the evacuation of Przemysl, the enemy attempted to resume their advance, but not until a week later were they actually able to do so. For a whole week the fighting was of a desperate nature especially on the Visznia and it was not until the 13th that the enemy was able to report that he had pierced the line from Sieniava to Czerniava (5 miles north of Mosciska), Mosciska

and the line south of the railway being evacuated next day by the Russians. On the 15th the Archduke's right was at Majdan connecting with Mackensen at Olcszyce, the enemy's front running from there through Jaworow (12 miles due north of Sadowa—Visznia) and Sadowa—Visznia to Rudki.

Grodek 18th-20 June. On the 17th June the line ran from the Vistula below Sandomir across the lower San through Kreszow and Tarnogrod to Narol, thence to Magierow and then due south to Grodek and along the Vereszczyna to the confluence of this stream with the Dniester where it connected with Lissingen.

Although Boehm—Ermolli had reached and entered Grodek on the 16th June the Russians stood firm all along the line of the Vereszczyna, repulsing every attack, for the next five days. On the 20th Mackensen bringing his left, which had hitherto been hanging back, round through Rawaruska, moved on Zolkiew. This turned the Grodek position on the north, and leaving strong rear-guards to cover their retirement, our allies withdrew through

Lemberg 22nd June. Lemberg on the 22nd June falling back towards the Bug and the Gnila Lipa. On the northern frontier they held a strong position on the Tanew and thence eastwards through Narol to Belz.

It was now Lissingen's turn again to take a share in the operations. We left him on the 12th June on the Dniester with his left at Mikolajow, his centre across the river at Zuravno and Sivka, and his right south of Halicz. On the 23rd he succeeded in crossing at Wartinow north-west of Halicz, and seizing Chodorow and bringing his left round he came into touch with Boehm—Ermolli's right at Bobrka. There was a pause of some days on the whole line, but on Lissingen taking, and crossing at, Halicz on the 27th the Russians fell back to their positions on the east bank of the Gnila Lipa, withdrawing next day their right from Belz and Mosty Wielkie to the line of the Bug between Sokal and Komionka, connecting at Gliniany with their left on the Gnila Lipa.

On the 29th June the advance of a portion of the enemy's forces northwards began, but it will be convenient to consider its operations separately when his eastwards advance comes to a halt in a few days time. On the 30th June the enemy east of Lemberg was vigourously attacking north and South of Rohatyn, and on the 1st July the forcing of the Dniester at Mariampol, south-east of Halicz caused the Russians here to fall back on the Zlota Lipa, their centre at Rohatyn and Przemyslany retiring two days later on the Brzezany and their right to the eastern bank of the Bug from Busk to Krylow. On the Dniester from Niszniew to Zaleszczyki Pflanzer was effectively held in check; at one or two points he succeeded in effecting small crossings but the Russians continued to hold firmly the northern bank of the Dniester. After the 4th July the enemy's *communiques* begin to report the situation in Eastern Galicia as "unchanged," and excepting successive extensions along the Bug north of Krylow conforming to the enemy's northward advance, the position of the opposing forces in this south-eastern theatre remains unaltered for nearly two months.

During the advance eastward of the enemy's main armies from the San, the role of that of the Archduke Joseph Ferdinand had been, as already stated, that of protecting Mackensen's left against the Russian force on the Tanew which filled what would otherwise have been a gap between the Russians west of the Vistula and those retiring eastward towards the Bug—at all costs the Granduke Nicholas was determined that there should be no separation of his forces. The position on the Tanew appeared a very strong one but between Narol and the Bug there was no good defensive line and it is when Mackensen instead of continuing to move eastward turns north a day after the Archduke that the Russian retirement from the Tanew begins with the evacuation of that line and that of the lower San. The enemy's advance was rapid the first few days, the Archduke with Lublin as his objective reaching the

The retirement on Lublin and Cheim 29th June.

line Zaklikow—Frampol on the 30th June, and the Josefow—Krasnik—Turobin line two days later, Mackensen being on his right between the Wieprz and the Bug and moving on Cholm. But on this line the advance came now to a stand still for nearly a fortnight, on the Archduke's Army the brunt of the fighting falling in this last stage of the Galician retreat, especially on his left about Krasnik. In the first two

Krasnik, 3rd–10th days of the weeks battle that ensued the July.

the Russians were driven back on both sides of the Lublin road to Urzedow and Bychawa, but re-inforcements were now reaching them and assuming a vigorous counter-offensive on the 5th, the Archduke, after five days desperate engagements was heavily defeated and driven back to Krasink and the Wyznica. Tarnogora was the farthest point reached by his right, while Stryjow and Grabowiec on the Wolica stream mark the limits of Mackensen's advance for the time being, the check received by the Archduke re-acting on him in addition to the resistance with which his right had met. On the 11th July on a line extending from Josefow on the Vistula to Grabieszow on the Vistula 25 miles south of Lublin and Cholm the Galician retreat comes to an end. It was to be resumed in a very few days time but the next retirement of what what was the 3rd Russian Army forms part of operations quite distinct from the retreat in Galicia.

West of the Vistula, the Russian Army of the Nida conforming to the retirement east of the river, and pivoting still with its right on the Rawka, had also been falling back step by step, and on the 11th July, its left was in touch on the Ilza—Josefow line south of Radom, Von Woysch's pressure against it gradually increasing.

A considerable alteration in the Russian front in the southern theatre has taken place, but a change is also to be noted in the extreme north in the Baltic province of Courland. There have been occasional references in the *communiques* to Shavli, and to the Dubissa and Windawa rivers, but the withdrawal of the Russian line to these rivers, and on the

Baltic to a point half way between Libau and Windau has passed almost unnoticed.

On the Western Front the most important events in the past two and a half months have been the close of the second battle of Ypres, which beginning on the 23rd April ended on the 11th June with a re-adjustment of the British line ; the loss of ground here being, however balanced by about an equal gain by the French north of Arras with the capture of the German positions at Carenny, Ablain, Notre Dame de Lorette and a part of Souchez. The French attack began on the 9th May but it was a month before they had consolidated their gains. The intensity and vigour of their attack gave rise at first to hopes that the great offensive of the Western Allies which had been expected to begin in the spring had at last been launched.

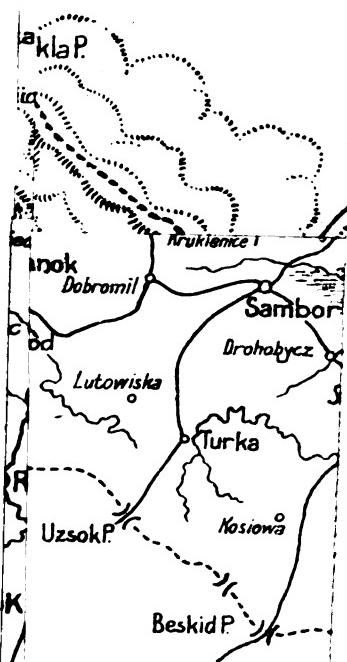
On the 25th April the theatre of War in Europe had been extended by the landing of an Anglo-French Army in the Gallipoli Peninsula, and still further extended by the entrance of Italy into the conflict on the 23rd May.

General Ivanoff's conduct of the great retreat in Galicia will take a high place in military history. Attacked in front and flank by greatly superior forces, his front apparently irretrievably broken at the outset, to have directed the rallying of this broken front so that for nearly a month it assisted materially in arresting the enemy's advance; to have successfully directed the orderly withdrawal of the other portions of his long front successfully uniting these portions into one unbreakable front; and after delaying the enemy for two and a half months to have brought his armies back intact, prove him to be a commander of a very high order. The offensive on a large scale and the seizure of the opportunities afforded him by the enemy for such an offensive were beyond his power, for it was impossible for the higher command to provide him with the necessary men and means, but, under his direction, every opportunity that presented itself for local offensive movements was time and again seized, and often with important results.

His subordinate commanders deserve no less praise, especially General Radko Dmitrieff, the commander of the IIIrd Army on whom the full force of the enemy's assault on the Biala fell. He has been charged with lack of foresight in not having provided second and third lines of defence on his front but assuming this to have been the case, it is doubtful if the ultimate result would have been materially affected in view of the enemy's overwhelming superiority in number of men, munitions and guns. His conduct of the retreat of his army to the San and of the operations on that river add to the reputation he gained at the very beginning of the war, and especially notable was the manner in which, when his left was broken, he maintained touch for four days with his centre at Tuchow and Tarnow, holding on until the retirement of this portion of his force was safely effected. The terms *debacle* and rout have been applied to the retreat of the IIIrd Russian Army from the Dunajec to the San. They are quite inapplicable. Rout implies a rate of retreat very greatly in excess of a normal rate of movement, which rate in the case of a large force may be taken as ten miles a day, if as much. From Tarnow to Jaroslav the distance is 80 miles in a straight line and it took the enemy thirteen days 2nd—14th May to cover it, or an advance at the rate of 6 miles a day. Von Kluck in his advance of 120 miles from the Belgian frontier to the Marne in also thirteen days (22nd August—3rd September), with his average rate of 9 miles a day can put forward a better claim than Von Mackensen for rapidity of advance or pursuit. For an account of the operations of still junior commanders, of those in command of divisions, brigades and battalions, the military student will have to wait some considerable time—when published it is certain that their operations will furnish innumerable tactical examples of the methods in which rear-guard actions should be conducted. Of the Russian soldier the remark by now is trite that in adversity he has no equal.

Having attained most of the objects which they set out to

achieve, the enemy cannot but regard the result of their operations in Galicia as in the highest degree successful. The threat of the invasion of their own territories had been removed; Galicia had been freed practically; and the line of the Vistula had been turned and very effectively as was shortly to be seen. The separation of the Russian Northern and Southern armies does not now seem to have been an aim, and the shortening of their line has still to come when the Warsaw salient has been straightened out. Not only was the gain of territory of great moral and political importance, but the strategical situation had been immeasurably improved, for the hitherto broad Warsaw salient had now become a dangerously narrow one for the Russians. But although the general results of the Galician campaign were, from the enemy's point of view, so highly satisfactory, it is possible that the German Great General Staff may not have felt quite so content with the operations of the campaign in particular, for in spite of many and important achievements, the Russian Armies after two and a half months still remained intact and undefeated. The military student will have noted many points for subsequent enquiry when the necessary information is made available. Why the separation of the Russian Armies North and South of the Vistula was not attempted will be one of them. With the selection of the front north of Tarnow as the point of penetration and the throwing of the whole weight on that point, it is scarcely to be doubted that the piercing of that front by the same means would have been effected with equal facility, when the right flank of the Russian Armies in Galicia would have been turned and safety of the forces on that flank at any rate seriously endangered. The piercing of the line here would have led up to the enemy's favourite movement that of envelopment. A possible explanation may be that the higher command in selecting the point where the Russian Western and Southern fronts formed a junction, designed the execution of a manœuvre which will be seen frequently practised in the next



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stage of the war when the advance on Warsaw begins and is continued into Russia—this manoeuvre consisting of the driving in of a wedge at a point and in a manner which will subsequently lead to the envelopment, or at worst the separation, of the two inner flanks of the broken front.

The manner in which Mackensen followed up his initial blow, driving the forces in his front in a north-easterly direction while his right moved east and south-east to intercept the Russians south of the Dukla Pass, gives colour to the supposition that this may have been the reason for the selection of the front south of Jarnow. If it be correct, the manoeuvre failed. The Russian troops south of the Dukla succeeded in evading the trap, while any design that Mackensen may have had against the southern flank of the force in his immediate front was frustrated by Donitrieff's dispositions. No other opportunity was presented to the enemy for practising this manoeuvre of penetration and double encirclement. An attempt to turn the right flank of the Galician Armies and to separate them from those now west of the Vistula may possibly have been the Archduke's aim in the last stage of the Galician retreat on the Krasnik front in the first week of July, but if so, it was the only attempt at this manoeuvre during the whole campaign. Simultaneous attack of both the western and the southern front of the Russian Armies or a double envelopment of both flanks, had evidently been placed out of court by the enemy from the first. The unsuccessful campaign in February and March had demonstrated the strength of the Carpathian front, and that the more effective method of overcoming the resistance in this theatre would be the turning of the front by a successful advance against the Dunajec—Biala line. If in the successively later dates of starting of von Bojna's, Boehm—Ermollis and Lissingen's armies, there was a deep design to place those of Mackensen and the Archduke in the rear of the Russian forces on and facing the Carpathians, this plan also was foiled by Ivanoff, and the enemy's strategical operations ultimately resolved themselves

into a drive, as they have been aptly termed. Of the general effectiveness of the drive, and of the nature of the results obtained there is, however, no doubt, and with the general situation in the approaching end of the twelfth month of the War on the Eastern Front the enemy had no cause to be greatly dissatisfied.

"UNDER MODERN CONDITIONS, WHEN A STATE OF WAR EXISTS, HOW TO DEAL WITH A HOSTILE ALIEN POPULATION IN OUR MIDST."

BY

2ND LIEUT. S. T. SHEPPARD, BOMBAY VOLUNTEER RIFLES.

The wholesale breaking of treaties, and of codes and regulations supposed to affect the conduct of war, which has characterised the behaviour of our enemies, and more particularly that of the Germans, during the war has at least taught the world to beware of precedents. When an enemy respects no form of bond or convention it is obvious that every problem that may arise will require solution *de novo* according to the changed conditions of warfare, and that, just as tactics and implements of offence and defence have to be modified or changed, so new ways have to be devised of dealing with questions so complicated as those, for example, of contraband or the treatment of enemy aliens. Moliere's sage remark that "les anciens sont les anciens et nous sommes les gens d'aujourd' hui" applies with peculiar force to the conditions of modern warfare: the experience of the past can never be neglected, but the practice of the past cannot be accepted without severe testing and inquiry as a guide to the modern conduct of international affairs. More particularly does this apply to the treatment of a hostile alien population in our midst in time of war. From the early practice of putting alien enemies to the sword—a practice which we can imagine the Germans highly approve inasmuch as they connived at, if they did not actually encourage, the massacre of the Armenians by the Turks—civilised nations passed on to the more humane methods of detention and arrest, or to the toleration of well-behaved enemies. The growth of British and Continental practice in this respect has been well summarised by Dr. W. G. Black, who writes* as follows:—

* In the *Glasgow Herald* of 20th October, 1914, reprinted in pamphlet form, "The Alien Enemy in our Midst," by William George Black, LL.D., published by Wm. Hodge & Co., Edinburgh, and Glasgow, 1914.

Hostile Alien Population.

In 1803 Napoleon I arrested British subjects found in France after the rupture of the Treaty of Amiens, but Great Britain had previously led the way towards a more liberal policy when in 1756 she allowed French subjects resident here "who shall demean themselves dutifully," to remain in the United Kingdom. In 1794, by treaty between Britain and the United States it was provided that in case of future wars the subjects of each State who resided in the country of the other "should remain un molested as long as they lived peaceably and observed the laws and should be granted a term of twelve months to wind up their affairs and leave, if their conduct caused them to be suspected." The example of Great Britain and the United States has been generally followed, but in 1870 German subjects living in the Department of the Seine were expelled when the German Army was moving on Paris.

Those treaties and acts clearly show a long-standing recognition of the general and very important principle lately defined in the Courts of Law (by Mr. Justice Bailhache, 16th October, 1914, in "Robinson & Co. vs. Continental Insurance Company of Mannheim,") that when two countries are at war all the subjects of each country are at war. That being so, it rests with each country to decide upon how to deal with its own peculiar alien problem, and in so doing to be guided in the first place by consideration of its own interests and, to a secondary extent, by consideration of the method adopted by the enemy. A bilateral arrangement with a straightforward enemy is obviously to be desired, but that presupposes an equal, or approximately equal, number of hostile aliens in each country. In the case of the United Kingdom and Germany at the beginning of the present war there was a disparity in numbers which prohibited an exchange of enemy subjects without giving a marked military advantage to the latter country. A Parliamentary Paper* bearing on this point has been published in England, which

*Miscellaneous [Cd. 7857] No. 8. [1915].

shows that at the outbreak of war about 5,300 British subjects were detained in Germany ; but the total number of male Germans above the age of 17 in the United Kingdom was about 27,200. Prolonged negotiations failed to discover any satisfactory basis for wholesale exchange, and a similar difficulty is likely often to recur when two great countries are at war. But even if there had been no great disparity in numbers, account has also to be taken of enemy aliens in the British oversea possessions whose number at the outbreak of war was very considerable. India and the Dominions therefore cannot be entirely guided in this matter by the Mother Country ; each has its own problem to deal with ; and as for India, there is on record the Secretary of State's assurance that the Government of India was trusted to exercise its discretion in solving that problem.

What was the nature of that problem ? It is unfortunate that the latest Census does not state the number of Germans, Austrians, Turkish subjects and Bulgarians in India. One is left to guess at their number from the following table (Census of India, 1911, Vol. I, p. 146) :—

European and Allied races in 1911.

	British Subjects.	Others.	Armenians:	Total.
India ... (Total)	185,434	12,648	1,705	199,787
Provinces	167,259	11,323	1,696	180,278
States and Agencies ..	18,175	1,325	9	19,509

So far no authoritative estimate of the number of alien enemies in India has been published, if indeed one has been formed. Questions in the House have failed to elicit any exact information on the point, though on June 24, 1915, Mr. Chamberlain stated :—"I am unable to give figures as

to the total number of "enemy aliens interned or still at large in India, but as regards enemy alien missionaries, consisting for the most part of Germans, the figures at the beginning of last April were:—Interned under military control at Ahmednagar, 115: compulsorily residing in a specified place under civil control, 70: at liberty, but on parole and subject to general civil supervision, 442. Those allowed to remain at their posts on parole were only so allowed on condition that they continued of good behaviour." If after ten months of war the India Office had no information as to the number of hostile aliens in this country, it is clearly desirable that, as a preliminary to dealing with the alien question in the future, steps should be taken to prevent a recurrence of such ignorance as to the extent of the alien population. The next census should be more specific, and should give the numbers and sex details of all alien peoples according to their nationality, and the police should be required to keep at any rate a rough register of the aliens in each town and district. In this war the lack of such details must have greatly handicapped Government in framing their initial measures for the safety of the country. Whatever the exact total of hostile aliens in India may have been, it is evident that there was in this country a sufficient leavening of alien enemies capable of doing untold mischief if they were allowed to remain at large: and it will hardly be disputed that there can have been nothing like an equivalent number of British Indians in Germany, so that exchange was impossible.

German intrigues in Persia and on the frontiers of India, and their nefarious designs hatched in the Far East and partly revealed in the evidence in the Lahore Conspiracy Case, have shown beyond all question that the enemy hoped so thoroughly to embroil India and the whole of the Middle East as to keep a large part of the British Army engaged in maintaining peace and order in this country. The German General Staff has made many miscalculations,

notably in regard to the loyalty of India, but it made no mistake in reckoning on the inflammable character of the Indian bazaar population: and there is little doubt that the activities of the "Emden" and the "Koenigsberg" would have been infinitely more harmful had it not been for the prompt interment of some of the more likely agents of German *kultur*. But it was only gradually, and after violent expressions of public opinion had been heard for many months, that any considerable number of aliens was interned, and it was not until November, 1915, that the first ship load of men and women destined for repatriation left Calcutta. There was therefore as little system in the conduct of this matter in India as there was in England, and one wonders what reasoning, other than an innate love of compromise, led the Government of India to adopt in the end a method of dealing with alien enemies which is in effect a combination of every conceivable method except that of putting the enemy to the sword.

This unsystematic treatment of alien enemies in India during the war may lead some to suppose that there are good grounds for exempting not only individuals but whole classes from being interned or repatriated. But examination of those cases fails to disclose the existence of any one comprehensive reason for allowing liberty to a throng so varied in character that it included, until more than a year of war had passed, every grade of priest from Archbishop downwards, laymen of all ages, and women of every degree of good and ill looks and of good and bad morals. A great variety of pleas must have been put forward by these enemies. The writer has heard of one case where a young and sturdy German engineer was allowed for nearly a year to retain his liberty subject to little more supervision and restriction of liberty than was necessitated by a daily visit to the nearest police station to sign a register. No doubt that humble

member of society could not be included among the "diplomats" who represented Germany in India before the war: yet Sir O'Moore Creagh in a letter to *The Times*—published October 12th, 1915—places under that heading missionaries and bandmasters, as well as Prince Henry XXVII of Reuss. But the case is worth bearing in mind as illustrative of tolerance reluctantly manifested at the demand of some small section of the public. Such cases have probably been more common than one supposes, and not under British administration only. English jockeys and stable boys, for example, interned at Ruhleben early in the war were released when German owners found their stables could not be satisfactorily carried on without them.

Far more complex in its various bearings is the question of the various German and Austrain priests, into the public discussion of which there has, unfortunately, crept a great amount of rancour and prejudice. It is essential that the nationality and not the faith of men should be first considered. Cromwell's enunciation of the doctrine that the State in choosing men to serve it should take no notice of their religious beliefs still has point, even in such a country as Germany, which is intolerant of the Jesuit Order. The German Jesuit may lose his civil rights in his own country, be prohibited from preaching, from celebrating High Mass, or in other ways from accomplishing his full priestly functions: but after long years of voluntary exile he will inevitably remain a German at heart. *This general

*The principle of placing nationality before religion, one's duty to one's King before one's duty to God, would be quite intelligible to many Indians whether under the influence of German missionaries or not. A Parsi high priest, Dr. M. N. Dhalla, in a lecture at Karachi [reported in *The Daily Gazette*, December 10th, 1915] on "The Indian Nation in the making" exhorted his audience to remember that they were *Indians* first and Hindus, Muhammadans, Christians or Parsis afterwards; for he said, "the Mother Country is superior even to Paradise."

principle must apply with even greater force to German missionaries of other persuasions who are free from any civil handicap in their fatherland. There is good evidence of this in a statement by the Bishop of Chota Nagpur, in his Diocesan paper for August, where he writes:—"Those who have been brought in contact with the Christians of this division know that they have been called English, German and Roman Christians according as they are members to the Anglican, Lutheran or Roman Catholic Communion. It has been a misfortune that in the case of the Lutherans, a name should have been adopted which identified them with a particular nationality rather than with a special type of ecclesiastical organisation. The result has been that in many cases the ignorant members of the communion have failed to distinguish between their Political and their ecclesiastical allegiance. Their loyalty has not always been above suspicion though there has been no deliberate disloyalty." The official apologist in Bombay* of the Jesuit Order claims that the German members of that Order are to be relied upon and that "during twelve months of the war their conduct has been unexceptionable, and that nothing whatever has been alleged against them by the Government—which gives a cogent presumption that their conduct will be equally unexceptionable in the future." It may indeed be that, like Socrates, they have been unjustly accused by the populace of corrupting the young: but the fact of their nationality remains, and even Jesuit casuistry cannot explain why the kinsfolk of the men who murdered Miss Cavell, sank the Lusitania, and trooped, raping and torturing women, across Belgium should be permitted to retain their liberty on British territory. It is perfectly true, as Father Hull says, that sectarian jealousy has intruded into the discussion of the arguments for and against the interment or deportation of German priests, but that has no more to do with the case than has Father Hull's own "terminological inexactitude" in *The Examiner* that

* *Vide "The German Jesuit Fathers of Bombay," by the Rev. Ernest R. Hull. S. J., published by The Examiner Press, Bombay, 1915.*

"it is only when Catholic monuments are involved that they are disposed of without ceremony." Columns of explanation were published in that journal a fortnight later in an attempt to show that the words quoted were meant to bear an interpretation quite different from that naturally attributed to them.

When all its work is done the lie shall rot.

The truth is great, and shall prevail

When none cares whether it prevail or not.

The good father had given a splendid example of the familiar Jesuit *cui licet finis illi et media permissa sunt*. But even more remarkable than the Jesuit defence of Germanic members of the Order was the shower of blessings which descended from Matheran upon the astonished heads of the German missionaries long after the repatriation order had been issued. It has already been shown that the Bishop of Chota Nagpur was fully cognisant of the evangel of nationality preached from German pulpits, but in November last he was reported to be among the delegates to the National Missionary Council who lamented separation from their brother Bosche.

For the last five days at Matheran the National Missionary Council, representing missions from all parts of India, has been holding its annual meeting. Among the forty or more delegates present, were the Metropolitan of India, the Bishops of Bombay, Chota Nagpur, and Dornakal, Drs. Mackichan and Ewing, of the Bombay and Punjab Universities, the Hon. Dr. Campbell of Bengal, and Mr. K. T. Paul of Madras On the recommendation of the Rev. J. H. Maclean, of the Scottish Mission in Conjeevaram, the following resolution with reference to German missionaries was passed:—"The National Missionary Council desires to place on record an expression of its deep thankfulness to God for the disinterested and self-denying labours of German missionaries in India, to which we owe the establishment not only of the existing German, but also of some of the most flourishing British missions. *The Council is convinced that their labours have throughout been inspired by*

devotion to Jesus Christ, and directed to the spiritual elevation of the people of India. The Council regrets, and would wholly dissociate itself from, those imputations of ulterior political motives which have been so freely made against them. The Council recognises the grave difficulty of the situation created by the war, and gratefully appreciates the sympathetic consideration which has characterised the attitude of Government in dealing with it. At the same time, the Council deeply regrets that the labours of the missionaries have inevitably been interrupted and sympathises with them in their present separation from the work which they love. Further, the Council deplores that the exigencies of the war have led to the interruption of the fellowship between German and other missionaries which was enjoyed before its commencement, and earnestly hopes that on the conclusion of peace, in the good providence of God, conditions may be such as to make possible the resumption of this happy co-operation in the task of extending Christ's Kingdom. In such co-operation lies one great hope of accomplishing the complete reconciliation of the nations now so widely sundered." (*The Times of India*, November 17th, 1915.)

The eminent persons who took that view apparently thought with Archbishop Keneally* that there could be no rational explanation for the internment or repatriation of a man for the only proved offence of being a German. It did not occur to them that these Germans must have been so "disinterested and self-denying" that they could, though ostensibly spiritual pastors, maintain neutrality on a point of morals, that they could not even bring themselves to denounce such acts as the sinking of the Lusitania, the murder of Miss Cavell, the massacre of the Armenians, and the atrocities in Belgium. In such a case silence can only mean approval: but silence may have been better than hypocrisy, for it at least showed who was against us and who was for us.

*His view is given in a letter published in *The Times of India*, August, 11, 1915.

One hesitates to inquire whether any public expression of grief, similar to that uttered by the Bishops and others at Matheran, was to be heard when Government determined to repatriate along with the missionaries a number of German and Austrian prostitutes who had been permitted to pursue their ancient and dishonoured profession in various large towns in India for the first 15 months of the war. The Christian charity of the Bishops did not apparently espouse their cause: yet the frail creatures were less able to defend themselves than, for example, were the members of the powerful Order of Jesuits. On the other hand, all the stone-throwing has been, in defiance of the scriptural precedent, against the priests, from which it will be seen that there is a rough justice in these matters. Whether the women of the town had any desire to do harm to the British cause is open to doubt. They are at all times under the eye of the police and liable to summary deportation for misbehaviour, and when war broke out they in all probability wished only to be allowed to remain in comparative comfort rather than be compelled to return to the desolate wastes of Galicia or the potato bread regime of Berlin. But that women of the lower class are capable of doing a vast amount of mischief is admirably shown by a story which originated in Rangoon in the early days of constant rumour and occasional panic. One woman is said to have given a Rs. 50 note in payment for Rs. 5 worth of goods in the bazaar, and to have refused the preferred change on the ground that paper currency was so rapidly depreciating that the note was really worth no more than one-tenth of its face value. *Se non e vero e ben trovato.* The fiendish possibilities of such an act will readily occur to those who have seen during the war how readily the bazaars of our great cities may be flustered by a word. But if it lies in the grasp of an ignorant trollop to further the aims of Germany in some such way as that which has been indicated, still more could educated women have achieved that purpose. Until the repatriation scheme was forced upon Government by public opinion, those German and Austrian ladies were allowed

to retain their liberty, under restrictions of the mildest type, and were given opportunities occasionally to visit their husbands at Ahmednagar, if the latter were interned. The married alien males consisted in the main of business men whose early internment was necessitated by the fact that they were admirably situated to carry on a mischievous campaign. Their businesses had been handed over to the Controllers of Hostile Trading Concerns, and to them *mutatis mutandis* can be applied part of the very important judgment delivered by Mr. Justice Bailhache in "The King *vs.* the Superintendent of Vine-Street Police Station," (*The Times* of September 6, 1915), in which justification for the internment of civilians as prisoners of war is maintained:—

"It is at first sight," Mr. Justice Bailhache said, "somewhat startling to be told that a civilian resident in this country, interned by the police on the instructions of the Home Secretary, can be accurately described as a prisoner of war. One generally understands by a prisoner of war a person captured during warlike operations by the naval or military forces of the Crown, or, perhaps, a civilian arrested as a spy. I think however, that the Courts are entitled to take judicial notice of certain notorious facts which may be summarized thus:— There are a large number of German subjects in this country. This war is not being carried on by naval and military forces only. Reports, rumours, intrigues, play a large part. Methods of communication with the enemy have been entirely altered and largely used. I need only refer to wireless telegraphy, signalling lights, and the employment, on a scale hitherto unknown, of carrier pigeons. Spying has become the hall mark of German *kultur*. In these circumstances a German civilian in this country may be a danger in promoting unrest, suspicion, doubts of victory, in communicating intelligence, in assisting in the movement of submarines and Zeppelins, a far greater danger, indeed, than a German soldier or sailor. I have come to the conclusion that a German subject : resident in the United Kingdom, who in the opinion of the Executive Government is a person hostile to the welfare of this country and is

Hostile Alien Population.

on that account interned, may properly be described as a prisoner of war, although neither a combatant nor a spy."

The bearing of that case, if not the law, is strictly applicable to India. Legal opposition to the internment of alien enemies has not in any case been raised in India, where special provision for such a contingency has been made.* Even without that provision no alien enemy could hope to appeal for protection to the Courts, as was shown in England in the case just quoted. In England by an oversight express power to intern alien enemies was not included in the emergency legislation, and was not dealt with by Order in Council. On that account the Solicitor-General was compelled to base his argument in the case quoted on the Prerogative of the Crown, and he thought himself forced to go so far as to claim that there still remained in the Sovereign the power to imprison civilians during time of war, whether they were alien enemies or not.

It has so far been shown what measures have been adopted in regard to German and Austrian subjects in this country, and it is obvious that if those measures and the method of carrying them out are regarded as satisfactory in every respect, the question propounded as the subject for this essay has already been answered. If on the other hand there has been good ground for the public uneasiness which has existed on account of the liberality of Government, its dilatory action, and its changes of policy, then there is scope for improvement, and in future wars Government will have the advantage of experience as a guide. Chambers of Commerce and other bodies have generally urged wholesale and immediate internment as the one infallible prescription. It has manifest advantages over the system which has been followed. It practically removes individuals with whom we are at war, no matter what their vocation or record may be, from contact with the outer world—but not entirely. In the nature of things the intern-

* By the various Ordinances passed at the beginning of the war and by the Defence of India (Criminal Law Amendment) Act, 1915.

ment of Europeans in India cannot be as secluded an affair as it is in Europe. Menials must be employed in large numbers to serve them and to keep the barracks or camp in a sanitary condition, and it is conceivable that by such humble agents the prisoners may maintain contact with the outer world. More important still is the fact that internment of any number connotes great expense in money and in men. It means the continued immobilisation of perhaps a battalion of British Infantry, that is to say the employment of men enlisted under the voluntary system for some very different object than that of watching insolent civilian prisoners day and night and all the year round. What alternative then can be proposed which will satisfy the public, remove all danger, inspire confidence in Government, not impose an undue strain on the military and civil administrations, and not be a tax on the country? The answer surely is wholesale and immediate repatriation.

That course of procedure would satisfy all the conditions enumerated. Two or three objections to it may be raised. In the first place, the transfer to Europe would be difficult, but surely not attended with any insuperable difficulties to the Power which has command of the sea : the males of military age could, if necessary, be sent to Europe in detachments on troopships. In the second place it may be said that such a proceeding would give the enemy an unfair military advantage. So it would: but to give the enemy even a battalion or so of men of military age is not a very considerable advantage, and it would in any case be compensated for by the fact that it would set free for service the men now employed as camp-guards. Exceptions would possibly have to be made, but they would be so few that each could be examined on its merits. Known or suspected spies, for instance, would not be repatriated but either executed for their offence or interned in jails in India. Other exceptions might be made for persons of German origin long naturalised as British subjects, but the recently naturalised should be put on parole and carefully watched. The marriage of alien enemy females to British subjects after the declaration of war should not be tolerated,

as has been done in more than one case after the repatriation order was issued, or, if the marriage is tolerated, the females should be sent to their country of origin or to some neutral country.*

A far graver objection to wholesale repatriation is that it could not be universally adopted. It is possible in the case of war with the Central Powers, but would it be possible in the melancholy event of war with France or with Portugal, and is it advisable in the case of Turkey? In the latter case it is notorious that Turkish subjects have been allowed far more freedom in India than those of their Allies. But these subjects are for the most part Arabs whose sympathy with Stamboul is at all times, slight, and at present practically non-existent owing to the high-handed manner in which their property in Iraq has been dealt with by the Turks. In such a case tolerance to men who will become British subjects, and who already appreciate the benefits of British rule, is not only politic but demanded by the peculiar circumstances of the case. France and Portugal on the other hand offer a different case for consideration. Each of those countries is bound to us by strong ties of alliance, and each of them has this feature which distinguishes them from other possible enemies—scattered possessions in India. In the remote event of war with either country it would be necessary at once, in order to maintain the tranquillity of India, to occupy their possessions with British troops and to disarm the inhabitants. The enemy European population of Pondicherry or Goa could be repatriated at once, in which case not much trouble need be apprehended from the half-caste and native populations. The Goanese scattered throughout British India would probably return—to our great inconvenience—to their native country, but in any case would not be the cause of any grave anxiety. Thus there is no reason why the repatriation of white alien enemies should

*The question of naturalised foreigners hardly comes within the scope of this essay, but it is a sound general rule to work by that foreign born persons who do not welcome every step which is necessary for national defence are best away, whether naturalised or not.

not be carried out in a war with any European Power or with the United States of America. In the event of war with an Eastern Power some other method might be preferable, as in the case of Turkey. It is impossible to imagine China, supported by any widespread national feeling, making war upon Great Britain: but circumstances might arise in which the Chinese in Burma and in Eastern India would be a distinct yellow peril, better guarded against by repatriation from such districts as Bhamo and by the internment of dangerous characters in towns more remote from the Chinese frontier. Increasing trade relations with Japan add every year, and will probably continue to add, to the Japanese population in India, and in the event of war a policy of repatriation—of the better class Japanese—and of internment of the rest, if they should be thought too numerous for convenient repatriation, would be advisable. Frontier wars present a different group of problems, so varying in nature that they can hardly be provided for by definite instructions or regulations. An outbreak of war with Afghanistan, for example, might coincide with the arrival of a ship-load of Afghan pilgrims in Bombay, in which case it might be well and politic to make smooth their homeward path. In such cases only is a system of mingled severity and lenience likely to be advantageous, and then only if discretion is allowed to the local authorities.

The objections to a policy of immediate repatriation which have already been cited do not appear to the writer to be very cogent, nor would any of the suggested exemptions, if granted, affect the fundamental argument that every hostile alien must be treated as an enemy. But there remains to be considered one small class of aliens, that which is scattered over the Native States in India. The Census statistics already quoted (*vide supra*: p. 2) show that in 1911 there were in the States and Agencies 1,325 members of European and Allied races other than British subjects. They obviously present for solution a problem distinct from that of the aliens in British territory. It is conceivable that an enemy such as Germany might sow its agents in the Native States, either

with a view to preaching sedition to the British Raj or, on the outbreak of war, acting as spies and sending information by concealed wireless installations. Such agents might by long residence and good service win their way to the esteem and trust of Chiefs, and their summary deportation on the outbreak of war at the request of the British Government might not only dislocate the administrative work of some States but also appear an arbitrary exercise of the paramount power. But it is to be anticipated that in such instances the loyalty of the Native States, which has been abundantly proved in the war, would prove equal to the emergency and that no coercion would be required to enforce the delivery to the British of the King's enemies. Delay in complying with the policy of the Government of India could in such a case only be construed as disloyalty on the part of any State, no matter how profuse might be its ruler's offers of men and money to support the British cause. The maxim that when two countries are at war all the subjects of each country are at war can admit of no exceptions for the benefit of any ruler. But it would obviously be unjust to ask Native Chiefs to observe that maxim in practice by surrendering every alien enemy in their territory, unless an equally rigid observance of the rule were carried out on British territory. Thus if any Germans and Austrians have been allowed in this war to retain their liberty in Native States, no accusation of disloyalty can on that account possibly be made against the rulers of those States. Why should we consider the mote that is in our brother's eye but consider not the beam that is in our own eye?

Whatever system of dealing with alien enemies in our midst may be adopted in any war, it is essential that it should be that which has the approval of Army Headquarters. It does not matter who gives the orders, what they are, or who carries them out, so long as those are the orders thought by the controlling authority of the Army in India to be best suited to the emergency. The alien enemy question is pre-

eminently a military question so long as the theory holds good that when two countries are at war all the subjects of each country are at war, and for that reason the desire of the Commander-in-Chief must form the policy of the Government of India. Conflict of views on such a matter cannot lead to good results, and if any claims are made to exemption from the broad principles laid down by the Commander-in-Chief, they should be reported upon according to their individual merits by local Brigade or Divisional Commanders and the final decision be left to Army Headquarters. Otherwise there will be interminable correspondence and argument between half a dozen different authorities—the Government of India, local Governments, the Police, Army Headquarters, Army Commanders and so on—and there will be a repetition of what has happened in 1914-15 when it has taken over 15 months to remove a few hundred enemies from our midst.

THE SUPPLY OF FOLLOWERS ON ACTIVE SERVICE FOR A BATTALION OF INDIAN INFANTRY.

BY

CAPTAIN C. D. WEBSTER, 30TH PUNJABIS.

The present war must have demonstrated the difficulty of obtaining followers, both public and private, to most Indian regiments ordered on service. Even during times of peace the servant question presents a problem of some weight and it is a marvel how, since the war began, our system with regard to the supply of these perfectly indispensable men has scraped along.

In the Field Service Manual, Infantry and Pioneers, Section 2, the War Establishment for followers is distinctly laid down, but how often is it strictly adhered to? According to it every Officer and the Sub-assistant Surgeon must have two servants; there must be one Mess servant; and four other regimental private followers, whose class is decided by the Officer Commanding, must be taken. The public followers consist of five per company, made up of two cooks, two bhisties and one sweeper.

In the Mobilization Regulations, India, (paras 54 & 55), the method of replacing deficiencies in everything but followers is stated. Even if it could be read as including followers, whoever heard of one regiment having a transfer of that class from another regiment?

Some will doubtless turn up para 1 of the Field Service Manual and remark that this is no "campaign under normal conditions". The argument will go against him, because the conditions in this war are so abnorimal and the wastage so great, that the follower establishment might with much advantage be increased, thereby making the supplying of them still more difficult.

Under the present system if the numbers fall short of the establishment, regiments must make their own arrangements to provide themselves with public followers. Many of these men

serve on far too long and would never be of any use on service. The consequence is that the doctor's searching examination previous to the Regiment's going on service creates frightful havoc in the numbers available. The "Unfits" are detailed for the Depot and then frantic letters are written to recruiting officers to send without fail and as soon as possible, so many cooks or bhisties or sweepers. Now recruiting officers do not, as some imagine, keep a supply of applicant followers waiting on their verandahs. On the contrary they have every whit as much difficulty in procuring them as the regiments themselves would have, if they sent their own sepoys to search in the villages.

But at the last moment there is the usual rush and every man in the regiment is required to make it up to war strength and for preparing for the move: not one can be spared for recruiting followers. Therefore off goes the regiment with a shortage and the poor Depot Commander has the invidious task of "raising" the followers and forwarding them as soon as he can.

Not only is it when the whole regiment moves that the pinch comes, but also when drafts are required for other corps; each one of them will take its complement of followers with it. And it is especially difficult to keep up to the regulation scale when several small drafts are sent, as a draft of 50 men will require as many followers as 70 will.

Therefore in the hope of making matters a little easier when the actual moment comes, the following suggestions are put forward.

All regiments to be made responsible that they have three langries, three bhisties, two sweepers, one dhobie and one barber, on a "waiting" list. After these men have been medically examined and found fit, their names and addresses would be registered and a sum of Rs. 3 a month paid to them as a retaining fee. Their names would also be registered in their own tehsils and the men themselves held responsible, under penalty, for reporting any change of address.

Only regiments and depots stationed near their own recruiting centres would be held responsible for their own supply; those at distant stations would be dependent on their recruiting offices. Class company regiments would in many cases have to employ both methods.

All recruiters sent out by regiments would be told to let the fact be known, in all the villages they enter, that retaining fees would be given to suitable men, and not only endeavour to procure them for their corps, but also for the Army as a whole and to take all volunteers to the recruiting office for examination.

The numbers on the Register in each recruiting office would be limited to twenty cooks and twenty bhisties, fifteen sweepers, five dhobies and five barbers.

These proposals would only be tentative for the duration of the war.

Now we will examine the question of the supply of British officers' servants, regarding which there is positively no system at all.

In the first place many officers (and at the present time there are a great many young officers who are not able to discriminate between a bad class and a good class servant) take anything that comes. *None* of the servants are medically examined when first engaged and a very large proportion are too old to proceed on active service and have to be paid off and dismissed at the last moment and hurriedly replaced by the first comer—if there happens to be one.

What is the result? Directly the orders come for the regiment to proceed on service, we find half the officers without servants or syces. A large proportion of them invariably have family ties which prevent them going. They one and all ask for huge advances of pay and make exorbitant demands in the way of wages, which in some cases are consented to.

The regiment then goes gaily off with some of its British officers, each of whom should have a reliable bearer

and syce, coolly remarking "Oh, I will carry on quite well enough with my orderly", or else "I am going to share a bearer with so and so and a syce with so and so", quite ignoring the fact that in all probability they will be separated from each other not long after reaching their destination, or that the precious "split" servant may go sick and that every sepoy employed on such work depletes the regiment of a valuable rifle and of a man who would be better employed at his legitimate job.

Then some think they will be able to pick up suitable servants at either Bombay or Karachi. Some do have the luck and get quite good men, but as a rule the class of servants procurable at these ports is not a very desirable one, and they are often quite ignorant of their work. Many of them are nothing more nor less than dock loafers and "wanteds" only too anxious to get out of the country for a while.

We all know that the average British officer is a person who wants a good deal of looking after; but few of us can cook and even if we could, we cannot afford the time as a rule.

Therefore on our servants our healths depend, so let us make up our minds to have good men. Every British officer must have a good healthy bearer, able to turn his hand to any job, and also a strong willing syce.

This then is the most important consideration, namely, that regiments themselves look to it that they are never deficient in this particular during peace time and that young officers, when first joining, are suitably provided. But to amplify this and to provide for emergencies I would suggest that at both Bombay and Karachi—and possibly at a few other large cities—officers' servants registries be instituted, under government supervision.

At these registries a good class of young healthy servant would be trained, free of charge, in cooking, baking, camp hygiene and all camp and valeting work. Before being registered and trained they would be medically examined. They would be informed that they would be paid at a fixed rate

according to the country to which they proceeded with their masters.

When detailed to proceed on service they would receive free rations and a suitable outfit, both of clothes and tentage, the exact extent of which they would be told beforehand and which would be provided them before they joined their employers, to whom the bill would be sent. They would be issued with a certificate stating the degree of proficiency they had attained in their schooling at the registry, to which would be affixed a photograph of the holder. Also with a service book, much the same as is given to a sepoy, and an identity disc, and the employer would provide his servant with regimental service badges.

It is most important that officers' messes should be furnished with good khansamahs, men who can be relied upon to serve up palatable meals in any place, in any weather, both during the cold and hot seasons, as there is no doubt that failing good cooking, many officers healths will deteriorate, especially during the hot weather, and the service will suffer. There might also be an assistant khansamah, who would go with regimental detachments or take the place of the khansamah himself should he fall sick.

It is true we get along somehow or other, but why leave things to chance? It is certain that regiments would feel the benefits of these suggestions were they properly taken in hand.

INFANTRY ESTABLISHMENT IN THE INDIAN ARMY.

By
RETired COLONEL.

When I was Commandant of an Indian Infantry battalion I realized the disadvantages of so weak a cadre being burdened with regimental staff and depot work so keenly that I submitted a scheme for reorganisation of the establishment of Indian Infantry which would have involved my reduction to the rank of major, a prospect not altogether displeasing from a financial point of view, as too rapid promotion is often counter-balanced by premature retirement.

I am now entirely disinterested and physically unfit for return to duty, but had my scheme been adopted every Indian Infantry battalion would, at the beginning of this war, have been able to take the field at once at full strength with a full reserve of all ranks including fully trained British subalterns. Before I retired we had got as far as having a common recruiting and reserve depot for 3 linked battalions. My scheme was based on making the depot the permanent regimental headquarters under a full colonel and freeing the 3 linked battalions from all depot and staff work.

My object as a battalion commander was to be able to devote all my time to infantry training proper without any responsibility for depot and staff work, office routine, reserve stores, workshops, etc. Every officer and man was to be always available for duty or training as a plain infantry man and never liable to be withdrawn from the ranks as a specialist in signalling, gunnery, mounted infantry, transport, or ambulance, or as an artificer, musician, recruiter, drill-master, etc. The only absentees would have been men on short leave or in hospital. I also suggested simplification of infantry drill and of pay, abolishing fractions and broken periods, economizing time, money and energy.

For the nonce, however, I only reproduce my advice as to numerical establishment.

BRITISH OFFICERS.

With the spread of railways the Staff Corps system of independent battalions with interchangeable officers promoted by length of service lost its raison d'etre. The linking of 3 battalions furnished a cadre of approximately the same strength as a British regiment of 2 battalions. The flow of promotion can advantageously be regulated by extending tenures of efficient officers and restricting the average to short tenures. To ensure a reserve of junior officers I suggested a direct commission annually to each battalion to candidates failing for Sandhurst or nominated by regimental commanders. After serving a year at the depot and two years with a battalion on full pay they were to be placed on half pay at £120 p. a. for 10 years after which they would retire with the rank of Captain without pay and without any legal obligation for further service.

REGIMENTAL STAFF.

- 1 Colonel Commanding 3 linked battalions.
- 1 Lieut.-Colonel Commanding Depot.
- 1 Captain, Regimental Instructor.
- 1 Captain, Regimental Secretary.
- 1 Lieutenant in charge Recruits.
- 1 Lieutenant in charge Machine Guns.
- 1 Lieutenant in charge Mounted Infantry, Transport and Ambulance.
- 1 Lieutenant in charge Signallers and School.
- 1 Lieutenant in charge Artificers, musicians etc.
- 3 Second Lieutenants Reservists.

BATTALION STAFF.

- 1 Major.
- 4 Captains, Double Company Commanders.
- 2 Lieutenants, Asst. Double Company Commanders.
- 2 Second Lieuts. Reservists, Do. do.

Total—1 Colonel; 1 Lt.Col.; 3 Majors; 14 Capts.; 11 Lieuts.; 9 Sec. Lieuts.

Each regiment would thus have 30 regular officers, 9 reserve officers under instruction and in due time 30 reserve officers (barring casualties) intimately connected with the regiment and capable of commanding a double company. The extra cost of reserve pay would be balanced by the saving on pensions, and reserve officers would not block the promotion of the regular lieutenants who would thus soon advance to the rank of captain with command of a double company, the lowest command suitable for a British officer in an Indian Infantry battalion.

INDIAN RANKS.

Regiment or Depot Establishment.

- 1 Regimental Subadar Major.
- 1 Jemadar Adjutant.
- 1 Jemadar Quarter Master.
- 1 Subadar Instructor of Recruits.
- 1 Jemadar Asst. Instructor.
- 1 Jemadar Instructor of Machine Guns.
- 1 Jemadar Instructor of Mounted Infantry.
- 1 Jemadar Instructor of Transport and Ambulance.
- 1 Jemadar Instructor of Signalling.
- 1 Jemadar Schoolmaster.
- 1 Jemadar Bandmaster.
- 1 Regimental Havaldar Major.
- 1 Regimental Quarter-Master Havaldar.
- 1 Regimental Band Havaldar.
- 1 Regimental School Havaldar.
- 1 Regimental Armourer Havaldar.
- 3 Regimental Drill Havaldars.
- 3 Machine Gun Havaldars.
- 3 Mounted Infantry Havaldars.
- 3 Transport Havaldars.
- 3 Ambulance Havaldars.
- 3 Signalling Havaldars.

Infantry Establishment.

- 23 Naiks (complementary to havaldars).
 - 48 Musicians.
 - 48 Artificers.
 - 48 Signallers.
 - 60 Machine Gunners.
 - 60 Mounted Infantry.
 - 12 Transport Assistants.
 - 12 Ambulance Assistants.
 - 300 Recruits.
 - 1,200 Reservists.
 - 3 Civilian School Teachers.
 - 12 Civilian Clerks.
- Total*—1 Sub. Major; 1 Sub.; 9 Jemadars; 23 Havaldars; 23 Naiks; 288 Privates.

The figures for Recruits and Reservists are maximum establishment. There should always be a sufficiency of trained recruits to fill up vacancies occurring in the 3 linked battalions.

BATTALION ESTABLISHMENT.

- 8 Subadars.
- 8 Jemadars.
- 1 Battalion Havaldar Major.
- 4 Colour Havaldars.
- 32 Havaldars.
- 32 Naiks.
- 23 Lance Naiks.
- 16 Buglers.
- 768 Privates.
- 4 Hospital Orderlies.

Total—16 Native Officers; 889 Rank and File.

If the 3 battalions could not be permanently located together at their regimental headquarters, they should be brought together for combined training under their own Colonel as often as possible.

Whenever a battalion was detached from the regiment, a proportion of the machine guns, etc., could be detached

with it, but the full band should preferably remain with regimental headquarters and one set of colours should suffice for the whole regiment.

Service in such strong localized cadres could be made very pleasant as well as instructive for all ranks.

THE INDIAN ARMY RESERVE OF OFFICERS.

By

MAJOR W. E. CRUM, CALCUTTA LIGHT HORSE.

The subject of the Indian Army Reserve of Officers is of such interest, not only to Regulars but also to Volunteer Officers and to employers of possible members of the Reserve, that any article which raises discussion on the subject is of wide importance, and an attempt to deal with some of the problems raised by Major Ellwood by one who is not a Regular Officer may not be out of place.

Before the war the knowledge of the very existence of an Indian Army Reserve was confined to a few enthusiastic members of that Reserve and their friends. The Regulations dealing with the subject were comprised in three pages of an Appendix to Army Regulations Volume II.

No serious attempt was ever made to recruit for the Reserve, the only standard of Military knowledge required was that the Officer should obtain a certificate of proficiency such as is granted to a Captain of Volunteer forces in India, and only in the case of cavalry was a yearly training of 14 days insisted on.

Except for retired Regular Officers there was no provision for promotion beyond the rank of Lieutenant, and no provision at all seems to have been made for pay except when called out on active service.

At the beginning of the war, or very shortly before this, the total strength of the Reserve was 39 Officers, of whom 11 were Cavalry and 28 Infantry, and of these a large proportion were retired Officers of the Regular Army.

The subject generally was taken up with great vigour as long ago as 1902 by the late Captain W. L. Graham, Indian Army Reserve of Officers and in 1911 he prepared a scheme dealing with many of the points raised in Major Ellwood's article, and in writing this article I have been greatly assisted by notes on the subject given to me by Captain Graham shortly before his death.

However, before any action was actually taken in regard to the matter the War began, and to those who know the qualifications of many of the men who have since joined the Reserve it is not surprising to read that they were quite ignorant of military subjects and duties.

Major Ellwood has told us very clearly what he requires; it is for us, the Volunteer Officers and employers of possible members of the Reserve, to say how we can help, and to assist Government by every means in our power to provide for the future.

Major Ellwood divides his requirements into two classes;
Requirements. first—Artillery, Indian Medical Service, Sappers & Miners, and Army Pay Department; second—Cavalry, Infantry and Supply & Transport Corps. To the above I would add Veterinary.

It is not quite clear why this division is made except that the first class requires greater technical knowledge, and that the second class is later on subdivided into two series of whom the first are to consist of Government Servants, who are presumed to be more readily available in an emergency, and the second of men employed in business firms or in some private capacity.

It would appear more simple and equally efficacious to divide the two series according to length of service, the first reserve consisting of those who had served for say 7½ years in the Indian Army Reserve of Officers and the second reserve those of longer service.

There is, I think, no reason to suppose that mercantile firms could not in an emergency be depended upon without fail to at once release a proportion of their assistants for active service, while it is significant that the Army Order issued on 24th September 1914 regarding the Reserve specially excludes gentlemen in Government employ, presumably because they could not be spared; both Government and business firms could most certainly more easily spare their junior than their senior Officers.

Here again Major Ellwood treats his two groups separately
Sources of Supply. on the ground that the first group required
 that with organisation men with the special training required
 would be as readily available as the men required for Cavalry
 and Infantry.

There is probably no arm among the Volunteers of the
Artillery. Presidency towns which is as efficient as
 the Volunteer Artillery; Calcutta, Bombay,
 Rangoon and Madras have all contributed complete units for
 service in East Africa and Mesopotamia, and a very large
 proportion of the Volunteer Artillery Officers in these ports
 would be eligible and quickly available for service.

In all the Presidency Towns there are large engineering
Suppliers and Miners. firms, the assistants in which would, with
 a very little training, quickly become efficient as Officers, and if organised a large proportion of these men
 would be at once available.

Major Ellwood rightly proposes to draw on the Banking
Army Pay Depart- community; men would be available on the
 ment. shortest notice, and if previously trained
 should be exceedingly efficient.

As Major Ellwood points out the number of Civil practitioners
I. M. S. is small, and it might be very difficult for them without due warning to make the necessary arrangements for leaving their work.

Here the greatest numbers are required, and the
Cavalry and In- greatest numbers are available. All that
 fantry. is wanted is system and recruits.

The chief sources must be the big Shipping and Contracting firms. There should be no difficulty about an immediate supply of well
S. & T. Corps. trained Officers.

Recruits would be available from the Civil Veterinary Staff, and certain number of private practitioners would be forthcoming.
Veterinary.

Some system should be established whereby every ~~Registration & Re-~~ young man who lands in India is registered.

At the same time recruiting committees should be formed in the large towns and in districts, and these should be kept informed by the registration staff of the advent of eligible men to their spheres.

Without some such system the old trouble will recur, that nobody has heard of the Indian Army Reserve of Officers.

These recruiting committees would easily find means of discovering whether the new comer is likely to become an efficient officer, and would be able to advise as to which branch of the service he would be best suited.

The recruiting committees might consist of one regular officer, and of Volunteer and Indian Army Reserve Officers, and would be responsible to and would report to the Brigadier of the district.

Major Ellwood dismisses the latter on the grounds that ~~Voluntary or Compulsory Service.~~ it is useless to discuss it until the State has decided to adopt universal service, but he goes very near compulsion in suggesting that the State should bring some form of economic pressure on firms which refuse to interest themselves in the matter! It would be certainly impossible without universal service to impose compulsion on that portion of the community fitted to belong to the Reserve of Officers, but since the almost unanimous opinion of business men in India favours some form of compulsory training, since compulsory service is now instituted in England, and since the conditions of service must, in fairness to the community providing the officers, be as liberal under a compulsory system as they would be under a Voluntary system, it would not seem out of place after discussing the conditions under a voluntary system, to consider the advantages and difficulties which would arise under a compulsory system.

Reserve of Officers.

VOLUNTARY SYSTEM. TERMS OF SERVICE.—For Cavalry and Infantry the regulations already laid down are sufficiently comprehensive. For other branches of the service the Officer Commanding the local Brigade would satisfy himself that the candidate had the necessary technical knowledge.

The great majority of men coming to India are between the ages of 20 and 25, and when once the system is established it would not seem necessary to go beyond these limits for recruits except in the case of retired regular officers, or men with previous training.

The first reserve might consist of men with less than 7½ years service, and under the age of 30; the second reserve of men with 7½ years service or more up to the age of 40, or even of 45, provided that they are so efficient as to qualify for promotion as suggested later.

As previously explained it is the younger men who could be most quickly spared by business firms, and hence the division into these two reserves.

This question is comparatively unimportant. A standard uniform would appear to meet the case, for owing to the frequent movements of both Regiments and Reserve Officers it would not seem possible for Officers to be attached to any one Regiment permanently, however desirable this might be from considerations of the interior economy of the Regiments.

Full dress and Mess dress might be optional provided the Officer was willing to purchase them himself; full equipment and service uniform must be provided and maintained by Government.

Major Ellwood does not discuss this question under the head of "Terms of Service", but it seems to me that the period of training is perhaps the most important item of the whole subject to the ordinary business men.

There must be both a preliminary and an annual training and they must be of such duration as to ensure that Government are getting officers sufficiently trained, and the business firms are not deprived of the services of their assistants for unduly lengthy periods.

For preliminary training periods varying from 6 weeks to 6 months have been suggested, with reductions in the case of men who have held commissions in the Home Special Reserve, Yeomanry or Territorials, or who have passed certain tests in the Officers' Training Corps.

There appears to be no reason why recruits for the Indian Army Reserve of Officers should not spend the first three or four months of their residence in this country with an Indian Regiment; from a business point of view the time spent would be by no means wasted, for an insight into the life of the Indian soldier which would be most valuable in the future would be obtained. I therefore do not think that there would be any general or serious opposition to a considerable preliminary training. Possibly in some cases it might be convenient to spread the preliminary training over two years.

As regards annual training it is presumed that all officers of the Indian Army Reserve would also be members of Volunteer Corps (I shall treat with this point later), and therefore it is probable that a continuous annual training of a fortnight with a regular regiment would be sufficient.

No business firm could object to this.

In addition to this period of continuous training it would seem very advisable that, at any rate in towns where Indian troops are stationed, frequent opportunities should be given to Indian Army Reserve Officers of taking part in the drill and manoeuvres of the local Regiments, while lectures on various subjects might be organised, and periodical tactical schemes arranged.

In fact wherever possible an attempt should be made to interest the young officers in military subjects in their leisure hours, and to make them feel that they were an integral part

Reserve of Officers.

of the army in India, and that the powers that be were taking a personal interest in their training.

A little personal interest shown by the senior officers of the station would go a long way towards creating a real keenness for efficiency among the younger officers and to stimulating the desire to learn.

PAY AND ALLOWANCES, PENSIONS ETC., are worthy of much consideration.

On active service and during training the Officers of the Indian Army Reserve would draw the same pay as Regular Officers, and travelling allowances etc. would be on the same scale.

For Cavalry it might be advisable to make a special continuous monthly grant towards the keep of a horse.

Government must be prepared to grant Wound and Family Pensions on the same scale as granted to Regular Officers of equal rank.

But apart altogether from pay on Active Service and during training, and pensions due to occurrences while on active service, some further inducement is necessary and equitable, and this should take the form of an annual grant to all officers who had completed their annual training to the satisfaction of the Officer Commanding the Regiment with whom they had served, and had obtained certificates according to the rank they held.

This annual grant might consist of a direct payment, or of a subscription by the State to an Insurance Fund to provide a lump sum in case of death or at a certain age.

The retaining fee to be paid annually should depend on the value of an officer of the Reserve compared with the value of a Regular Officer, and it is for Government to say what this comparative value is.

The Indian Army requires more officers in the case of an emergency, and the Indian Government must pay for them.

A yearly grant of £ 50 would I think certainly attract; at the age of 25 it would be equivalent to a Life Policy of £1,100 payable at death or at the age of 45.

In this connection it must be born in mind that there is no leisured class among the British in India, and that the problem is therefore entirely different here to what it is in England.

All officers would be required to pass language tests, and Tests and Certifica- would also have to pass examinations for tes. promotion similar to those of the regular army, but perhaps rather less exacting, and omitting (d) IV.

It is not quite clear why Major Ellwood would not permit Officers of the Indian Army Reserve to serve also as ordinary members of Volunteer Volunteers. Corps. It is indeed from among the ranks of the Volunteers that the majority of the present Indian Army Reserve Officers have been recruited. The Calcutta Light Horse for instance have furnished 54 men for the Indian Army Reserve and a further 75 have been granted commissions at home or elsewhere. Only six of the above previously held commissions in the Regiment.

There would seem to be no valid reason why Officers in the Indian Army Reserve should not also be Non-Commissioned Officers, troopers or privates, in Volunteer Regiments; in fact unless they were allowed to become such, their training would be limited to the annual fortnight together with any time they could put in with local Regiments.

The fact that the ranks of the Volunteers contained Officers of the Indian Army Reserve would increase the efficiency of the Volunteers.

Volunteers are required principally in the case of local disturbances, and it does not seem logical to deprive them of the services of the 1,000 or so active young men probably required for the Indian Army Reserve. It is of course obvious that all officers of the Indian Army Reserve cannot also be volunteer officers, since the vacancies occurring for them in local Volunteer Corps would not be sufficient, especially in the big towns, though it is probable that in time all Volunteer Officers would either be past or present officers of the Indian Army Reserve, and in making promotions preference would certainly be given to Indian Army Reserve Officers.

Reserve of Officers.

This must depend as in the Regular Army on age, length of service and proficiency, but probably should not go beyond the rank of Captain or in very exceptional cases of Major, except in the case of retired officers of the regular army who would retain their rank.

On active service promotion would of course depend greatly on efficiency.

Some system of promotion is however absolutely necessary. Though the present Reserve had, at the beginning of the war, been in existence for about 20 years, only one officer had during that time been promoted to the rank of Captain, and it would greatly discourage an Officer of the Indian Army Reserve to know that on joining for active service he would be, possibly at the age of 35 or 40, junior in rank to the latest joined regular sub-altern, whose local and military knowledge would almost certainly be far below his own.

There is no doubt that the uncertainty of obtaining a permanent commission in the Regulars in the event of war will to some extent act as a deterrent to married men beyond a certain age remaining in the Reserve.

If called out for active service an officer may have to give up his work with no certainty of getting it back at the end of the war, and no certainty of being allowed to remain in his new profession.

The Army Order of 24th September 1914 deals with this point but is somewhat vague.

It would certainly be an inducement if it were laid down that Reserve Officers of suitable age and qualifications *would, not might,* be recommended for permanent commissions.

Firms generally have promised men who have joined the Reserve during the war to keep their places open, and have acted liberally as regards pay, but there are professions in which it is impossible to give these promises, and in these cases men who go on active service should, if successful, be able to count on the Army as a future career.

Officers should be allowed to transfer from one branch of Transfers.— the Service to another with the sanction of the Officer Commanding the local Brigade.

Under a voluntary system it is exceedingly difficult to see Arrangement with what arrangements could be come to; there firms. is no doubt whatever that an appeal to patriotism would succeed with a very large number of firms; special recruiting committees as suggested under another head might personally appeal to business houses; it is possible too that Chambers of Commerce might take the matter up, and make it one of their conditions of membership that a firm would allow not less than a certain percentage of its assistants under the age of 40 to belong to the Indian Army Reserve.

I really believe that after this war there will be no difficulty with business firms, provided that Government state their needs in plain language; and once it has become the custom for firms to allow and encourage their young assistants to join, there should be no lack of recruits.

Even through the commercial community in India is in Compulsory Service in favour of some system of universal training, there are many difficulties in its application to the Indian Army Reserve Officer. The assistants in mercantile and trades firms are recruited from every class, and there are many who would not be suited for the work.

No British firm in India could complain were its assistants to be made liable for the necessary training for local defence, but small firms with the minimum of assistants might be very severely handicapped in comparison with larger firms were these assistants to be liable at any time for active service throughout India.

Nor do I believe that compulsion is necessary in order to obtain officers for the Indian Army Reserve of Officers provided that the terms of service are made sufficiently attractive.

If before the war the Indian Army Reserve of Officers had been organised, if its existence had been generally known about, and if efforts had been made to obtain recruits, there would not have been these just complaints of the ignorance of the would-be officers. After the war a large number of present Indian Army Reserve officers will return to their former work, but will remain officers of the Indian Army Reserve; for many years after the war a very large percentage of the men coming to India will either have fought in the war or will be members of the Officers' Training Corps at home.

There is indeed a scheme which might well be introduced regarding young men desirous of coming from England to take up work in India; it might be laid down that no young man would be allowed to leave England for India, or would be allowed to reside in India unless he had undergone a period of training as an officer in England or had served for a certain time in the ranks of some Home unit.

This would provide for military training in the case of every young man who arrived in the country, and the Recruiting Committees might well be left to do the rest.

Provided that a wellconsidered plan for the Indian Army Reserve of Officers is prepared and ready there will be no lack of recruits after the war, and if universal training is introduced in India it is very probable that the enthusiasts who were formerly Volunteers will take the opportunity of doing something more by joining the Indian Army Reserve of Officers, while the work of the registration staff and the Indian Army Reserve recruiting Committees will be much simplified.

Summing up therefore we seem to require:—

- (1) A definite pronouncement from time to time by Government of its requirements in the different branches.
- (2) A well considered scheme for encouraging and training Officers.
- (3) A system of registration of all young men coming to the country, these men being previously trained.
- (4) Recruiting Committees in the big towns and in the

**"Correction to Major Crum's article, under
the heading of Promotion."**

(SEE PAGE 290).

" Since these notes were written, paras 18 and 19, appendix 3, Army Regulations Vol. 2, have been entirely reconstructed by India Army Order No. 446, dated 26th June 1916, and they now read :—

" 18. (a) Provided that they are recommended, officers of the Indian Army Reserve of Officers will ordinarily be eligible for promotion to the rank of Lieut., Captain, Major or Lieut.-Colonel respectively after completing 2½, 9, 18, and 26 years' service from the date of the first commission.

(b) Officers with previous commissioned service in the army will be given the rank last held therein and be allowed to reckon previous regular commissioned service towards further promotion.

19. (a) Officers reported fit for accelerated promotion may, on the recommendation of the Commander-in-Chief in India, be promoted at any time to any higher rank by the Governor-General of India in Council, subject to His Majesty's approval.

(b) Officers are forbidden to apply for any special consideration in the way of promotion."

districts who would receive information regarding possible recruits from the registration bureau, and would interview the heads of firms.

If possible, the proposals for the system should be prepared and discussed, so that they can be brought into force immediately the war is over.

TRANSLATIONS FROM RUSSIAN NEWSPAPERS.

"The Russky Invalid."

11th to 24th December 1915.

Observation and Communication in the Heavy Artillery.

The Great War has brought to the front the question of the application of a new and powerful fighting machine in field operations—heavy artillery of unlimited calibre and weight, which is now employed in defiance of all previously existing rules and limitations. Owing to a lack of war experience in the employment of this new arm, the majority of heavy field gunners during this present war have had to fall back on the existing and previously proved "Regulations for the use of Field Artillery in battle." However, certain special peculiarities of Heavy Artillery, some tactical and others purely technical, seem to demand certain departures from the above regulations. One of the first and most important questions, which require reconsideration for Heavy Artillery, is that of observation and intercommunication during the battle.

First of all, it is essential to alter the present grossly faulty ideas on the subject of "favourable" and "unfavourable" targets for Heavy Artillery. Most old artillery commanders, when setting problems to heavy artillery gunners, have a habit of starting these problems with the formula "Large Columns and Heavy Artillery", and thereby very often enforce complete inactivity on them, since nowadays the appearance of large columns on the field of battle is very exceptional and, as a rule, only occurs before the opposing forces are in close contact with one another, at a time when the heavy guns are not usually in position, so that even searching for the enemy's heavy artillery is also a practical impossibility.

On the other hand, such a so-called "favourable" target may prove to be quite insignificant, in its power of affecting the progress and action of a given battle, compared

with the inconsiderable mark, *i. e.*, "unfavourable target", which may be offered by the enemy in attacking some part of the line, which for some reason may be unobserved by our artillery and weakly held by our infantry.

It is, therefore, essential to recognize that any target is "favourable" for heavy guns, if this target can in some way or another have an effect, on even a small portion of the front, on the result of the battle.

The whole question resolves itself into the ability to appraise correctly and at the right moment the targets offered, so as, on the one hand, to economise in the expensive heavy projectiles, and, on the other, to avoid the choice of wrong targets, which would reduce the effective action of the heavy guns. Needless to say a great deal depends on the experience and skill of the observer, who must be allowed all possible latitude in the matter of opening fire on his own initiative: unless this is permitted, his observations will often be useless, on account of accidental delays in transmitting the orders to open fire, and owing to the speed with which events develop in battle. This last factor, that of speed, is so marked in modern engagements, that ranging by fire on all local objects and tracts of terrain, which could serve the enemy later on in the action as deploying points for his attack, should be "obligatory" rather than "optional."

Turning now to the essence of the question of observation and intercommunication in the heavy artillery during a battle, we must not forget that the region covered by its fire is not confined to the front of one Army Corps or division, but may extend over that of two and even three adjacent corps, the actual extent depending on the technical properties of the weapons, such as their extreme range and maximum amount of traverse, and on the configuration of the front. It is also obvious that heavy guns cannot move with the same ease and impunity as field guns, especially considering the above-mentioned factor of speed in development of the present day

batteries. In consequence, once in position, heavy guns should be able to render their powerful support from there over all portions of the front, sometimes very considerable, which is allotted to them.

This important task presents several difficulties in its realization, both as regards observing the field of battle and the provision of communication, especially with a view to obtaining speed and punctuality in the latter. It can be readily understood that, over such a wide front as that of two or three corps, one or two observation stations cannot be found with sufficient field of view to be satisfactory, especially in more or less broken or wooded country. When one remembers the enemy's ever increasing tendency to occupy local features, which enable him to form an irregular, wavy line, not easily defined and located even through glasses, one can at once see the growing necessity of pushing forward observation posts into the infantry firing-line and sacrificing the field of view to accuracy and clearness of observation. Even more is this necessary in broken and wooded country, where special posts are required for practically each company's front, to watch the approaches up to it and behind the enemy's line, the furnishing of such a number of posts is impossible both for the heavy batteries, on account of their extended field of fire, and for the field batteries, owing to lack of sufficient instruments and personnel. Field batteries may on certain occasions be able to observe their smaller front successfully, but this is hardly ever possible over the far greater front covered by heavy guns.

There are then two courses open to one:—

- (1) To establish one, two or, in rare cases, three observation posts, according to the number of apparatus and telephones available, and with their help try to carry out the allotted task: this has the undesirable effect of depriving the great part of unobserved front of the heavy guns' valuable fire effect, which at times is the only kind that can reach the enemy, and of restricting their potentially wide field

of fire to the narrow limits of the terrain under observation.

- (2) To adopt the system of observation and fire-direction, described below: this method was in use before the war in the French light artillery and is known as "Communication from below".

The main feature of this method is that each company in the firing line observes its own front and can always, in case of necessity, call for the needful support of the heavy artillery. This method, which goes far towards realizing the ideal of close co-operation between the infantry and artillery in the direction of fire, is not very difficult to carry out, and is executed in three ways.

(1) Artillery observers move about continually from one part of the position to another and, by means of the telephones provided to each company commander, direct fire from points with a good field of view to search out the more important local objects and parts of the enemy's position. They make notes on the results of the successful shots giving each target some conventional name (such as: "trench near Village N": "field work M" "Copse to south of Lake R") and also state opposite which part of our line these targets are situated. (Section 5 of the 100th Regiment). In doing this it is not necessary to go on shooting at all these objects until the range is found exactly, but is sufficient to note the shots that fall nearest them, unless, of course, at the moment of range-finding the target is an important one, when it should be destroyed at once if possible. It must be understood that the company commander or one of his subalterns should be told the names given to these objectives to enable him, in case of necessity, to inform the battery of the locality on which fire should be opened. The final ranging on these objects is corrected by these officers, who should use the simplest terms, confining themselves to four words:—Over, short, right, left. Experience shows that a good map and celluloid protractor are of great assistance in the preliminary

ranging, which is best done with high explosive shell, which nearly always produce an explosion somewhere within the observed locality: thus this method of ranging does not expend as many rounds as might be expected at first, the more so as no battery fire is required, single shots being enough. Points in our line which offer a wide field of view or a deep one, *i.e.* far behind the enemy's line, are supplied with their own telephones and are made into special artillery observation posts.

This form of "communication from below" requires considerable time to set going and, as can be seen, is mostly employed in the siege type of warfare, when both sides are in position, or when the enemy is attacking a position which we have prepared beforehand. As regards technical instruments, this form of communication requires practically nothing, for the telephone lines from companies to battalion head-quarters, battalion to brigade, brigade to division, already exist and enable any company to communicate its observations to the division, who transmits it by special line to the batteries. However, the danger of overloading the regimental-staff telephones certainly does make it highly desirable that there should be special artillery lines to ensure the punctual and prompt communication of observations direct from the brigade to the battery, without going through the divisional terminal. The further the point of observation is from the battery (it might, for instance, be in another corps) the more complicated does the question of communication become, but it is not impossible: such calls on the heavy artillery's support should be confined to the most urgent cases only.

The only adverse criticism that can be applied to this form of communication is—that the artillery are dependent on untrained observers, but, as shown above, after the preliminary range finding, the work of these observers is very simple and practically only consists of pointing out accurately on the map the location of the target and correctly appraising the target itself. The artillery itself furnishes the

special observation posts, great care being taken in selecting them as regards field of view and importance of the terrain observed: so that it may be said that this system represents the nearest approach to the ideal of the closest co-operation of infantry and artillery, which alone can command success in battle.

(2). The second method of communication from below is a simplified form of the first. It is used when there is less time at one's disposal. It consists in this, that besides the artillery fire delivered and directed by the orders of the permanent artillery observation stations, fire can be opened on targets pointed out from the infantry positions, the infantry officers also correcting the preliminary ranging shots on these targets. Although this preliminary ranging takes more time and more rounds than under No. 1 system, on account of unskilled observation and correction, still experience proves that it is quite practical and successful. Remembering that fire on these objectives is supplementary to that directed from the proper artillery observation posts, one cannot but agree that this method assists the work of the guns and contains nothing essentially undesirable.

(3) The third method consists in using not only the heavy artillery's own observation posts but also those of the light batteries. Under this system the field of observed fire of the heavy guns is well extended, while the disadvantages in range finding, obtaining under system No. 2, are eradicated. The technical side of the communication question is met by laying supplementary telephone lines from the headquarters of the Divisional Light Artillery to the heavy batteries: it is much to be regretted that the existing means of communication are not sufficient to enable the whole front of fire to be equipped with telephones, which necessitates communication being restricted to the adjacent divisions only. However, the general increase in allotments of communication instruments of heavy batteries should do much to remedy this defect, since it is only by using these to

their fullest extent that full benefit can be obtained from these new and powerful instruments of war.

As regards communications during our own offensive movements, the formerly held views have not materially changed, that is that it is essential to inform the heavy batteries beforehand of the point or region, against which the main attack is directed, to enable it to select and equip their own advanced observation posts.

In conclusion, it may not be amiss to express the wish that each separate heavy artillery division had its own captive balloon. Since the absence of good observation points in flat or intersected country prevents full use being made of the inherent advantage of heavy artillery—long range.

19th December 1915, to 1st January 1916. (English date.)

A German Officer's Remarks on our (the Russian) Infantry.

In a Norwegian military paper there is an article by "one of the most senior German Officers", (who was in Russia in 1901) taken from the *Frankfort Gazette*.

In reading this article one must remember that it is written by one of our enemies and that, therefore, alongside those words of praise which the author could not help giving our gallant army there are also criticisms unfavourable to it.

19th December 1915, to 1st January 1916. (English date.)

We reprint the article almost in its entirety and leave it to our comrades at the front to decide on the justice of his criticisms.

"Already in time of peace," writes the author, "we possessed detailed and generally accurate information about the Russian Infantry, but, of course, a prolonged campaign has led to a yet deeper and more detailed knowledge."

In the Russian Army the Field Artillery is considered the best arm of the service, and therefore, in common with all special troops, is composed of picked men with a good school education. Such men, however, are comparatively

"The Russky Invalid."

rare in Greater Russia and are only sufficient to fill the ranks of the special branches. The greater part of the army, infantry and cavalry, is composed of illiterate men, who form 65 per cent of the total Russian population. Schools are, of course, rarest among the country population and thus the latter forms the greater part of the infantry: this fact constitutes both its weak point and also its strong point: the infantry gets strong, hardy, simple and easily satisfied men, and in this respect I noticed no difference between various corps: only the Guards and Grenadier Corps had taller and better built men.

The Russian Infantry is well, in most cases, indeed, excellently clothed: the brown-grey uniform cloth is made of good, stout, lasting material: overcoats are of very strong stuff, something like felt: boots could not be better. I must confess that most of us did not expect the Russian Infantry to be so well equipped: in this respect our ideas need correction. Tales of worn-out boots, tattered uniforms, of infantry without weapons, of shells filled with sand, can be safely regarded as fables. However, I did notice a certain difference between various corps in this respect: the Siberian corps were especially well equipped and armed. The upkeep and maintenance of (transport) waggons and weapons seemed to be generally bad, even making allowances for campaigning conditions.

All the prisoners, with whom I came in contact, used to complain of bad feeding arrangements and said that they had nothing to eat for five days: they wished to excite our sympathy by this and, as a matter of fact, succeeded since we used to give them food and drink. But often their robust and well fed appearance led us to think that they greatly exaggerated their hardships and on closer examination we generally found each of them had at least a bit of bread on them. On the whole it was evident that the Russian Supply Corps was doing a great deal more than we expected of it.

The lack of education is partly compensated by other advantages peculiar to the peasant class and generally to "people of nature," such as endurance in all weathers, a good eye for country and capability of making the best use of the simplest tools and instruments. Villagers in Russia for the most part do all their own jobs themselves, and only call in proper carpenters for making houses, which are practically all of wood, and even here the simpler parts of the work are done by members of the family. It is, therefore, not surprising that the Russian soldier is a useful man with spade, axe and saw. Under the conditions of modern warfare this handiness of the Russian soldier is of the greatest importance: whole fortresses would spring up in a night without the aid of engineers: their trenches were always excellently adapted to the ground.

Russian Infantry, and also artillery, whenever possible avoid taking up their main positions on eminences: if they are forced by circumstances to include them in their defensive line, they usually construct trenches on them, but only to serve as false positions or as the rearmost positions for a retreat made through several intervening gaps. The Russians, like the French, generally prepare at least three successive positions. The main position's entrenchments are, of course made especially carefully: in front of it there is generally an advanced line covering it; and in addition a position in rear. At IVANGOROD there were these three lines extending along the whole front and in places all three were manned: at times our troops found it hard to determine which was the main position, since fire was being delivered from all of them; the men in the second line of trenches shot all the time, using an elevated backsight were necessary, over the heads of their men in the first-line trenches, and hit a few men in our rear. As a matter of fact, the fire from the main position did not affect us much: it seemed as though the men were not aiming at all, with very few exceptions the cone of fire fell some hundreds of yards behind

our front. This fact, which repeated itself again and again, points to faulty training in musketry.

In modern warfare fire control has become very difficult, even in trenches, on account of their broken up formation, so that the fact abovementioned also points to insufficient attention to the individual training and development of the soldier.

However, Russia is full of contradictions: and this is true of their musketry: in each regiment, each battalion and even in each company there are some excellent marksmen. It is presumed that these belonged to the scouting detachments, who receive special training, and who are composed of hunters and foresters and generally of men accustomed to the use of fire arms: the musketry of these detachments is of a very high order: they are employed for patrol and outpost work, and are also often placed in commanding and enfilading positions: in the first few weeks of the war we suffered considerably from their fire; it is especially necessary for staff officers to be on their guard against them when carrying out reconnaissances of positions. It is rumoured that these marksmen are often armed with rifles fitted with telescopic sights, but I have not been able to get a look at one. The work of these detachments, however—the author consoles himself—is not reflected in the mass of the infantry generally, who are chiefly remarkable for lack of energy and a natural phlegm: the Russian soldier is usually obedient and well disciplined, but lacks the "will to conquer," and therefore, the spirit of the offensive is weak in the infantry. If it is a question of sitting in and holding on to trenches, they will do it well and show great endurance, but it is rare to see them carry out an energetic attack: as a rule this is only seen as the last measure of self-defence, when there is no other position in rear to which they can retreat when the time comes.

Russian infantry has very rarely offered a good mark to our artillery: they always adapted themselves very suitably to the ground: when there was no cover they attacked in small

parties at the run, thus offering unfavourable targets. Very often when large open spaces had to be traversed by day, they used to make beforehand at night a number of pits, in chess-board formation, each capable of sheltering 2-3 men from shrapnel fire: we used to fire bombs into these with a good deal of success.

The Russians use their machine guns quite cleverly: they do not care about putting them in their fire trenches, but prefer commanding positions, sometimes even putting them in trees: their fire was effective only at short ranges: I do not know whether this was due to some defect in the weapon or in the training of the gunners: very possibly due to both. The infantry's best work has been done in retreat, and was certainly good: it was helped by a whole series of successive positions, ready entrenched in rear. At the beginning of the war the Russians often confused and deceived us with their "false positions".

I have obtained from the most authoritative diplomatic sources, for publication, an account of an incident, which occurred at the very beginning of the war and which even now continues to affect the whole Balkan policy of the Quadruple Entente. The vacillation of the powers—the inconsistency of London, the indecision of Paris, the aloofness of Rome—are all explained by this incident.

It appears that the Greek "Vazilevs,"* long before the Bulgarian Tsar, betrayed the powers which are the protectors of his country and sold himself to the Austro-Germans. What diplomats and general public could formerly only suspect is now proved by documentary evidence.

To King Constantine himself we owe the fact that the "Breslau" and "Goeben" entered the Black Sea and are now in the Bosphorus.

* It is not known what the word "vazilevs" means: presumably a traitor. It is not printed as a name, with a capital letter, but may perhaps be a name used as a term for traitors, possibly the name of Russia's notorious traitor during the Tartar wars, I think, about the time of Ivan the Terrible.

"*The Reich.*"

March 2nd, 1916.

Greek Treachery.

Venizelos, the Prime Minister of Greece at that time, offered the services of Greece to England and France during the first days of August. The English Admiral in the Eastern Mediterranean decided to make use of this offer when the two German warships hid in the straits of Messina after bombarding the Algerian ports. It was necessary to close their ways of escape after the expiration of the legal period. (Italy, as all know, was then strictly neutral). The Eastern end of the Mediterranean was divided into sectors across its breadth. The southern sector was entrusted to the French squadron, the central one to the English, and the northern one to the Greek. The latter's role was simply to keep watch. The Greek cruisers and torpedo-boats could not stop the German ships, and indeed had no right to do so. But they were to warn the British Admiral by wireless of their approach and then the allied squadrons could close on them and force an engagement. The Commander of the Greek fleet, Admiral Kunduriotis, personally directed the operations of guarding the Ionian sea.

Kunduriotis accepted the task, but by the orders of King Constantine, explained to the Premier, Venizelos, that he preferred to report the results of his observation service to him rather than to a foreign Commander. The re-transmission of any such communication to the British Admiral would only take a few minutes by wireless. Venizelos agreed to this.

The British Admiral, however, received no message whatsoever. It soon became known that the "Goeben" and "Breslau" had dashed across the Ionian into the Aegean Sea, and thence into the Dardanelles. The English and French squadrons could not have failed to see them; consequently it was the Greeks who let them through in silence. Venizelos received no radiogram from Kunduriotis.

Constantine had ordered the latter to report the approach of the German ships not to the Admiralty nor to the Foreign Office but to the royal palace alone. The King got the telegram and put it in his pocket and only handed it on to Venizelos when the German ships were out of danger. Venizelos had not the right to denounce his own King's treachery and even had to justify the action of the Greek Admiral.

The Allies now, very naturally, do not believe one word of "Vazilevs": the Bulgarian Tsar also continued to the last moment swearing that he could never take up arms against Russia. The Allies could not decide earlier to undertake a Balkan campaign through fear of a Greek attack on the rear. At the present moment, when they are preparing for the enemy's attack on the Salonika positions, they demand the demobilisation of Greece. Constantine is yielding but exceedingly slowly and unwillingly. The Allies have to exert strong pressure on him, and they possess a well-tried weapon for this—a blockade.

There is no doubt whatever that Constantine would very much like to share in a new partition of the Balkan peninsula, preferably with the Bulgarians and Austrians than remain as a spectator in rear of the Allies. The only thing that holds him back is the fact that the Allies can blow his seaports to pieces before the Kaiser could hurry to his rescue.

Greece may once again play the traitor at her own chosen moment. Her demobilisation should be insisted on in the shortest possible time.

E. DMITRIEFF.

"*Russki Unbalid.*"

8th February 1916.

The review of the military situation is devoted principally to a consideration of Germany's future aerial activities. It is stated that according to trustworthy evidence Germany will increase her activity in the way of Zeppelins and large aeroplanes in the coming spring, both on the Russian and French fronts.

Germany's aerial fleet is divided into three classes. In the first category are included aeroplanes of the Albatross type. These are used for long distance reconnaissance. These have superseded the Taube, owing to superior speed and greater invulnerability. They are strong machines and capable of prolonged flights.

The second class comprises the war machines. Their speciality lies in the fact that they have two propellers and an armoured car, which latter accommodates not only machine guns but also light quick-firing guns of small calibre. These war machines are designed for combat with similar enemy machines and for the destruction of dirigibles.

The third class includes the Fokkers, which are constructed with strictest secrecy, and up to the time of writing none of these machines have been captured. Aviators are strictly forbidden to fly beyond the German lines on these machines, and in case of being forced to descend in country held by the enemy are enjoined to destroy the machine at whatever cost.

It is however observed that the technical side of aviation is much more highly developed and perfected with the British and French than with the Germans, while the Entente fleet is also stronger.

ASIA MINOR.

"Разведчик"

16th—29th February 1916.

Erzerum.

An event of the utmost importance has occurred. The glorious Caucasus army has captured Erzerum. The importance of the fall of Erzerum is really tremendous, as this town is the most important point in the whole of mountainous Armenia and constitutes the key of Asia Minor.

The highlands of Armenia are intersected by natural roads leading from Constantinople eastwards to Alexandropolis and Tiflis, and from Trebizond southwards to Baghdad. Here rise the rivers of the Black Sea, the Caspian and the Persian Gulf,

the valleys of which served the nations of antiquity as a means of communication and as a sphere for their activities. In a word, the highlands of Armenia are the focus of the universally used routes intersecting Asia Minor. This is the real reason of their importance, as also of Erzerum.

This town is the chief stage and storehouse or depot on the Persian meridian (transit) or so-called Genoese road and plays a similar role for the trade of Armenia, Anatolia, Syria and Mesopotamia.

The uniting of these conditions has made Erzerum of the first strategical importance in the theatre of operations in Armenia, which fact has been perfectly realised by the Turkish Government which considered Erzerum "The key and hope of Turkey."

The Erzerum sphere bounded on the north by Lazistan and on the south by the Palanteken group of mountains, is a naturally strong fortress watching all lines of advance both from the Caucasus and from the west (Constantinople). Realising its strategic importance, the Turks have concentrated all their efforts on the fortification of this already naturally strong locality, and out of Erzerum they have made a really powerful fortress.

Eventually, in the present war, when Erzerum had been considerably strengthened as regards fortifications it became a *point d'appui* for the Turks in all their operations, and a menace to our Caucasian army whose operations it limited.

This fortress is situated on a high plateau fringed on three sides by considerable heights, representing by themselves a formidable position. On the North there is the ridge of the Dumnoy-Dag at 35 versts from the town, on the South the rocky mountains of the Palanteken at a distance of 7 versts from the town, and on the East, the Deve-Boinu ridge, the Northern extremity of which lies 20 versts to the South East of Erzerum and the Southern at 7 versts to the East of it. On the South East slopes of the Dumnoy-Dag and along the whole of the Deve-Boinu ridge there have been erected a line of outer forts, nice in number (to the east of Erzerum

at 12 miles from the town). On the heights immediately to the east of Erzerum has been constructed the second line of defences, 4 forts (5 versts from the town), and to the south on the Palanteken hill—another two forts. Finally in the immediate vicinity of the town 2 versts to the east, there are yet another two forts, and one near the northern face of the perimeter. The town itself is surrounded by a double wall of antique design and construction.

Latterly German engineers have been very busy improving the defences.

According to peace-time evidence the armament, of Erzerum consisted of about 1000 guns, of which about 460 were on the forts, 380 on the central perimeter, and besides these there were about 200 field and mountain guns.

As regards the garrison of the fortress, judging by certain data, it consisted of portions of the IX and V Corps, and the XI Corps, which took shelter in the fortress after their January disasters.

Although, up till now, there are no details of the operations at Erzerum, it is obvious from previous official reports that our forces approached Erzerum not only from the west but also from the north by way of Olti. This route is guarded by the closed work of Kara-Gebek about thirty versts from the town. At about 5 versts south of it at the exit of the gorge of the Erzerum valley lies the Tafta work. This fort links up by fire Kara-Gebek and the left flank forts of the Deve-Boina position, Chaban-Dede.

From the above fact we may conclude that our troops commenced by capturing Kara-Gebek, the most isolated, and that they then, after an artillery preparation, stormed the fort of Tafta.

On the 2nd February besides the two above-mentioned forts, we captured seven others. We thus found ourselves masters of: Kara-Gebek, Tafta, Choban-Dede, Dalan-Gez, Uzun-Akhmat-Karakol, Uzun-Akhmat No. I., Kaburga, Yurta-Yuk, Orta-Yuk Plyabesi, *i.e.* all the outer line of Erzerum forts. 70 guns were captured as well.

On the 3rd February the fortress itself fell, and the Caucasian regiments entered the town.

This was no easy victory. Extraordinary efforts had to be made in order to reach this town surrounded by mountain ranges, as if by walls reaching a height of 4,500 to 8,500 feet.

More than once the troops were under snow. This gigantic task has been crowned with complete success. There is no longer any menace to our Caucasus army or to the army of our ally the British in Mesopotamia.

Almost without the support of heavy artillery, in deep snow, and a 25 degree (Reaumur) frost, the Caucasus army has maintained its glorious reputation.

"Новое Время"

15th December 1915.

Summary of the operations in the Caucasus.

Events in the Balkans and on the other fronts have somewhat overshadowed the operations in the Caucasus. The official communiques have been meagre and have not given any indication of the importance of the operations which have been recently carried out. Skirmishes and advanced guard actions, in which the Turks have been severely punished, have occurred almost continuously along the whole front. If their losses were totalled, they would amount to their losses in one of the great battles.

Ever since their failure at Melasert and Kilinsin, where the Turkish army suffered severe defeat, the enemy, in the absence of any probability of obtaining a decision, has limited himself to a series of minor operations, in one direction or another, hoping to obtain a partial tactical success.

The procedure has been as follows. After an ill-directed artillery preparation, the Turks have left their trenches and have commenced the attack. At long range, this has been carried out in accordance with the rules of war, as our artillery has held its fire; but at close ranges our guns and machine guns have opened a murderous fire which has

paralysed the attack and has put the enemy to flight. Our troops following on the heels of the flying enemy have occupied his trenches.

It would seem that besides being disheartened by the Melasgert-Killinsin failure, the enemy is suffering from want of supplies. It must be exceedingly difficult to supply an army of more than 150,000 occupying a front of 650 versts* from the Black Sea to Lake Urumia, the more so since the country is ill-provided with practicable roads.

Before the war, and in the early days of war, supplies were conveyed by transports to the Black Sea ports and thence by road to Erzerum, which served as the base of the army. Good roads had been constructed, connecting Erzerum with the ports, since the Turks had been convinced by German strategists that they would undoubtedly have command of the Black Sea. The command of the sea, however, passed into our hands and the regular transit of supplies ceased. Since then it is doubtful whether any large quantities of contraband have succeeded in getting through. The sinking by our destroyers of the gunboats *Orda* and *Burak* has proved that warships, although attended by submarines, cannot safely venture into the Black Sea, even close to the coast of Asia Minor; of transports it is unnecessary to speak. Cut off from the sea, the Turks reorganised their lines of communication on land. If we consider that the distance from Erzerum to the ports is from 160 to 240 versts,** while to the terminal stations of the railways of Asia Minor the distance is from 500 to 800 versts,*** and moreover that the largest and best roads are those leading to the sea, it is easy to see that the difficulties of supplying an army of 150,000 must be almost insuperable. What need, therefore, to contemplate the possibility of operations on a large scale.

*430 Miles

**Roughly 100 to 150 miles.

***Roughly 350 to 550 miles.

The following are the more important events of the last two months.

In the littoral region the enemy tried with considerable forces to assume the offensive three times. He even succeeded in crossing to the right bank of the Arkhave, but each time was driven back with heavy losses.

In the Olti region the Turks attacked our positions in dense masses for 48 hours without ceasing. In spite of their heavy losses it was not till they reached our front line where they came under cross fire, that they were hurled back, leaving many dead and wounded.

In the Alashgert valley the enemy's efforts were on a grander scale. The Turks attacked Mullasekir, in the direction of which they had evidently collected a number of troops from other parts of the front, with the intention of piercing our line. The attack failed with great losses and our troops assumed the offensive capturing part of the enemy's position.

In the Melasgert and Van regions our operations were of a more active character. In the former we dispersed a large band of Kurds near the villages of Irishad and Zartuu, capturing their positions. In the Van region on the 23rd and 24th November heavy fighting took place large forces being engaged on both sides. The fighting began at Vastan, where the Turks and Kurds were severely defeated. Thence they retired to the line of the village Barkunis, where they had already prepared a position. Here they maintained themselves a whole day, but were finally driven out with heavy losses. Our troops advanced one march in the direction of Bitlis.

In the region of Urumia our troops were heavily attacked by mounted Kurds supported by infantry. The enemy were invariably driven off by our fire and at last after a succession of fights we succeeded in driving them out of the region of Shahtepe and Shaitanov. These incessant attacks by the Kurds seem to point to the

fact that they have not despaired of obtaining a success in this region.

Our aviators have done excellent work, dropping bombs and causing considerable damage besides demoralising the enemy.

Continuous fighting has thus been taking place on the Caucasian front. Our methods, while inflicting heavy losses on the enemy, enable us to take advantage of his activity and to occupy, with small losses, his strongly fortified positions.

Judging by the methods of the Turks, it is evident that they are anxious to avoid operations on a large scale and under the pressure of German officers are trying to secure a partial success, not so much from the desire of tactical gain as from the wish to improve the moral of their troops.

These aimless attacks prove that the higher Turkish command has no military policy. The serious attack at Alaskert alone seems to point to an attempt to pierce our line and drive us over the frontier. The endless attacks of the Kurds in the Urumia region indicate an attempt to drive in our left flank and to cause us to evacuate Van, an important centre and junction of routes.

To sum up, our troops have repulsed a number of fierce attacks, have inflicted heavy losses on the Turks and Kurds, and in the regions of Alashgert, Van and Urumia, have occupied considerable portions of the enemy's positions.

QUARTERLY SUMMARY OF MILITARY NEWS AND ITEMS OF INTEREST.

ARMY HEADQUARTERS.

102. Dress.—It is notified for information that in the case of officers joining the Army, the provision of undress uniform and mess dress is optional during the war. The term "officer" includes officers of the Indian Army Reserve of Officers, and officers of the special Reserve, or officers with temporary commissions sent out from home to do duty with units in India.

I. A. O.
21st February 1916. Such officers will wear the service dress uniform of the unit or department to which they are first attached and they will be permitted to wear evening dress (short jacket) in lieu of the prescribed mess dress for the period of the war.

The provision of summer mess dress by these officers is also optional.

104. Prisoners of War—Postal Arrangements.—The following instructions regarding correspondence for British and Indian prisoners interned abroad are published for the guidance of all concerned:—

I. A. O.
21st February 1916. *What may be sent.*
Postcards, unregistered letters and parcels may be sent *free of all postal charges* to British or Indian Prisoners of War interned abroad. Money Orders may be so sent, except to Turkey.

Newspapers and newspaper cuttings must not on any account be sent either by letter or parcel post.

The transmission of coin to prisoners of war, either in letters or in parcels, is expressly prohibited.

Address.

The address of articles intended for Prisoners of War should be in the following form and must be written very distinctly *in ink*.

*In the case of Military Prisoners only.

*The name of the place of internment, if known, should always be stated. All letters, parcels etc., for Prisoners of War in Turkey should be addressed "Central Post Office, Constantinople" instead of to the place of internment.

FORM.	EXAMPLE.
*Rank, initials, name	... Private A. G. Thomas.
*Regiment (or other unit)	... 2nd Argyll and Sutherland Highlanders.
British (or Indian) Prisoner of War	... British Prisoner of War (or Indian Prisoner of War).
*Place of Internment	... Doeberitz.
Country (Germany, Austria-	... Germany.
Hungary, Holland, Turkey, etc).	
C/o General Post Office,	... C/o General Post Office,
Mount Pleasant,	Mount Pleasant,
London, E. C.	London, E. C.,
	England.

All articles for *Indian* Prisoners of War are subjected to Censorship at *Bombay* and those for *British* Prisoners of War in *London*.

The envelope in which a letter is placed should, therefore, be left open and should be enclosed in a cover superscribed "On Prisoners of War Service" and addressed, in case of an *Indian* Prisoner of War, to the *Postal Censor, Bombay*, and in the case of a *British* Prisoner of War, to the *Deputy Chief Censor, (Hostile Countries) Salisbury House, London, E. C., England*.

Letter Post.

Correspondence should be limited to private and family news and to necessary business communications. No references to the naval, military, or political situation, or to naval and military movements and organisations are allowed.

It is advisable to send postcards in preference to letters, as postcards are less likely to be delayed. If letters are sent, they should not exceed in length two sides of a sheet of note paper, and should contain nothing but the sheet of note paper. The writing should not be crossed.

Letters and postcards should be written in English and if addressed to Prisoners of War interned in Germany they are likely to be delivered more quickly if written in German.

The use of the letter post is restricted to Letters and Postcards. Anything else must be sent by parcel post. Packets may not be sent by letter post.

Parcel Post.

Parcels must not be accepted for a Prisoners of War unless they bear in the address the name of the place of destination. In the case of parcels for Prisoners of War in Turkey the place of destination should be given as "Central Post Office, Constantinople." The address must be printed or clearly written in ink in at least two places on the outer cover of the parcel. The name and address of the sender should be printed or clearly written in ink on the cover. Parcels must be packed very carefully and substantially and in such a manner as not to impede examination by the Censor.

***236. War Leave—Officers.**—The following special War leave

I. A. O. rules for *British Officers* are published in super-
17th April 1916. session of those contained in India Army
Orders 131 and 541 of 1915:—

- (i) All British Officers of the British and Indian Services serving regimentally, or on the staff or with departments and services, may be granted War leave up to a maximum of 30 days in any one year (1st April to 31st March).
 - (ii) In addition to, or in combination with, the above, district or temporary leave for a period not exceeding 15 days, may be granted at the discretion of General Officers Commanding.
 - (iii) At the discretion of General Officers Commanding Divisions and Independent Brigades not more than 15 per cent, calculated reasonably, of the total of British Officers may be permitted to take leave at any one time. In the case of units in which this 15 per cent would mean that no officer could proceed on leave, General Officers Commanding may use their discretion and allow one officer to be away at a time.
2. The above leave is granted under the following conditions:—
- (a) Leave may be taken at any time throughout the year unless leave is specially closed under orders from Army Headquarters.
 - (b) Leave under paragraph 1, (i) and (ii), may be taken continuously, or in instalments, subject to the approval of the General Officer Commanding.

(c) All British Officers must be within 48 hours of recall (but see paragraph 4).

3. *In addition* to leave under paragraph 1, (i) and (ii), three days' recreation leave may be granted to British Officers, at the discretion of Officers Commanding units, on condition that they are within 12 hours of recall (but see paragraph 4).

4. The following special concessions are applicable to officers stationed in the Frontier Brigades, at Loralai and at Fort Sandeman:—

(i) An extra 10 days' leave may be granted at the discretion of General Officers Commanding concerned. This leave is *in addition to* and may be taken in conjunction with the periods mentioned in paragraph 1, (i) and (ii)

(ii) The three days' recreation leave is extended to *five* days.

(iii) In the Bannu and Derajat Brigades, the 12 hours of recall for recreation leave and 48 hours for War leave may, at the discretion of General Officers Commanding, be extended to 24 and 60 hours, respectively.

United Service Institution of India.

PRISE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
1873...COLQUHOUN, Capt. J. A. S., R.A.
1874...COLQUHOUN, Capt. J. A. S., R.A.
1879...ST. JOHN, Maj. O. B. C., R.E.
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.
1882...MASON, Lieut. A. H., R.E.
1883...COLLEN, Maj. E. H. H., S.C.
1884...BARROW, Capt. E. G., 7th Bengal Infantry.
1887...YATE, Lieut. A. C., 27th Baluch Infantry.
1888...MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (especially awarded a silver medal).
1889...DUFF, Capt. B., 9th Bengal Infantry.
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.
1893...BULLOCK, Maj. G. M., Devonshire Regiment.
1894...CARTER, Capt. F. C., Northumberland Fusiliers.
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.
1898...MULLALY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (especially awarded a silver medal).
1899...NEVILLE, Col. J. P. C., S.C.
1900...THULLIER, Capt. H. F., R.E.
 LURBOCK, Capt. G., R.E., (especially awarded a silver medal).
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R.F.G., R.E., (especially awarded a silver medal).
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908...JEUDWINE, Maj. H. S., R.A.
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (especially awarded a silver medal).
1911...MR. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
1914...BAINBRIDGE, Lieut.-Col. W.F., D.S.O., 51st Sikhs, (F. F.)
 NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
 (specially awarded a silver medal).
1915...No award.

MacGRÉGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of May:—

(a) For officers—British or Indian—a silver medal.

(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves; also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments, such as Frontier Militia, Levies and Military Police, also all ranks serving in the Imperial Service Troops.

MacGregor Memorial Medallists.

(With rank of Officers at the date of the Award).

- 1889...BELL, Col. M. S., V.C., R.E., (specially awarded a gold medal).
- 1890...YOUNGHUSBAND, Capt. F. E. King's Dragoon Guards.
- 1891...SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894...O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...BURTON, Major E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

QUARTERLY SUMMARY OF MILITARY NEWS AND ITEMS OF INTEREST.

ARMY HEADQUARTERS.

103. Dress.—It is notified for information that in the case of officers joining the Army, the provision of undress uniform and mess dress is optional during the war. The term "officer" includes officers of the Indian Army Reserve of Officers, and officers of the special Reserve, or officers with temporary commissions sent out from home to do duty with units in India.

L.A.O.
21st February 1916.

Such officers will wear the service dress uniform of the unit or department to which they are first attached and they will be permitted to wear evening dress (short jacket) in lieu of the prescribed mess dress for the period of the war.

The provision of summer mess dress by these officers is also optional.

104. Prisoners of War—Postal Arrangements.—The following instructions regarding correspondence for British and Indian prisoners interned abroad are published for the guidance of all concerned.—

What may be sent.

Postcards, unregistered letters and parcels may be sent *free of all postal charges* to British or Indian Prisoners of War interned abroad. Money Orders may be so sent, except to Turkey.

Newspapers and newspaper cuttings must not on any account be sent either by letter or parcel post.

The transmission of corn to prisoners of war, either in letters or in parcels, is expressly prohibited.

Address.

The address of articles intended for Prisoners of War should be in the following form and must be written very distinctly in ink:

*In the case of Military Prisoners only.

*The name of the place of internment, if known, should always be stated. All letters, parcels etc., for Prisoners of War in Turkey should be addressed "Central Post Office, Constantinople" instead of to the place of internment.

FORM.	EXAMPLE.
*Rank, initials, name	... Private A. G. Thomas.
*Regiment (or other unit)	... 2nd Argyll and Sutherland Highlanders.
British (or Indian) Prisoner of War	... British Prisoner of War (or Indian Prisoner of War).
*Place of Internment	... Doeberitz.
Country (Germany, Austria-...)	Germany. Hungary, Holland, Turkey, etc).
C/o General Post Office,	... C/o General Post Office, Mount Pleasant, London, E. C.
	Mount Pleasant, London, E. C., England.

All articles for *Indian* Prisoners of War are subjected to Censorship at *Bombay* and those for *British* Prisoners of War in *London*.

The envelope in which a letter is placed should, therefore, be left open and should be enclosed in a cover superscribed "On Prisoners of War Service" and addressed, in case of an *Indian* Prisoner of War, to the *Postal Censor, Bombay*, and in the case of a *British* Prisoner of War, to the *Deputy Chief Censor, (Hostile Countries) Salisbury House, London, E. C., England*.

Letter Post.

Correspondence should be limited to private and family news and to necessary business communications. No references to the naval, military, or political situation, or to naval and military movements and organisations are allowed.

It is advisable to send postcards in preference to letters, as postcards are less likely to be delayed. If letters are sent, they should not exceed in length two sides of a sheet of note paper, and should contain nothing but the sheet of note paper. The writing should not be crossed.

Letters and postcards should be written in English and if addressed to Prisoners of War interned in Germany they are likely to be delivered more quickly if written in German.

The use of the letter post is restricted to Letters and Postcards. Anything else must be sent by parcel post. Packets may not be sent by letter post.

Parcel Post.

Parcels must not be accepted for a Prisoners of War unless they bear in the address the name of the place of destination. In the case of parcels for Prisoners of War in Turkey the place of destination should be given as "Central Post Office, Constantinople." The address must be printed or clearly written in ink in at least two places on the outer cover of the parcel. The name and address of the sender should be printed or clearly written in ink on the cover. Parcels must be packed very carefully and substantially and in such a manner as not to impede examination by the Censor.

*236. **War Leave—Officers.**—The following special War leave rules for *British Officers* are published in supersession of those contained in India Army Orders 131 and 541 of 1915:—

- I.A.O. 17th April 1916.
- (i) All British Officers of the British and Indian Services serving regimentally or on the staff or with departments and services, may be granted War leave up to a maximum of 30 days in any one year (1st April to 31st March).
 - (ii) In addition to, or in combination with, the above, district or temporary leave for a period not exceeding 15 days, may be granted at the discretion of General Officers Commanding.
 - (iii) At the discretion of General Officers Commanding Divisions and Independent Brigades not more than 15 per cent, calculated reasonably, of the total of British Officers may be permitted to take leave at any one time. In the case of units in which this 15 per cent would mean that no officer could proceed on leave, General Officers Commanding may use their discretion and allow one officer to be away at a time.
2. The above leave is granted under the following conditions—
- (a) Leave may be taken at any time throughout the year unless leave is specially closed under orders from Army Headquarters.
 - (b) Leave under paragraph 1, (i) and (ii), may be taken continuously, or in instalments, subject to the approval of the General Officer Commanding.

(c) All British Officers must be within 48 hours of recall (but see paragraph 4).

3. *In addition* to leave under paragraph 1, (i) and (ii), three days' recreation leave may be granted to British Officers, at the discretion of Officers Commanding units, on condition that they are within 12 hours of recall (but see paragraph 4).

4. The following special concessions are applicable to officers stationed in the Frontier Brigades, at Loralai and at Fort Sandeman:—

(i) An extra 10 days' leave may be granted at the discretion of General Officers Commanding concerned. This leave is *in addition to* and may be taken in conjunction with the periods mentioned in paragraph 1, (i) and (ii)

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(iii) In the Bannu and Derajat Brigades, the 12 hours of recall for recreation leave and 48 hours for War leave may, at the discretion of General Officers Commanding, be extended to 24 and 60 hours, respectively.

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

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1874...COLQUHOUN, Capt. J. A. S., R.A.
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1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908...JEUDWINE, Maj. H. S., R.A.
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (especially awarded a silver medal).
1911...Mr. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
1914...BAINBRIDGE, Lieut.-Col. W.F., D.S.O., 51st Sikhs, (F. F.)
 NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
 (specially awarded a silver medal).
1915...No award.

MacGREGOR MEMORIAL MEDALS.

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(b) For soldiers—British or Indian—a silver medal, with Rs. 100 gratuity.

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Note.

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* *N.B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies, in their reserves, also those serving in Auxiliary Forces, such as the Volunteers and Corps under Local Governments, such as Frontier Militia, Levies and Military Police, also all ranks serving in the Imperial Service Troops.

MacGregor Memorial Medallists.

(With rank of Officers at the date of the Award).

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RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892...VAUGHAN, Capt. H. B., 7th Bengal Infantry.
- JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
- FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894...O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
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- 1901...BURTON, Major E. B., 17th Bengal Lancers.
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- 1902...RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

MacGregor Memorial Medallists—*contd.*

- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.
- 1912...PRITCHARD, Capt. B.E.A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
WARATONG, Havildar, Burma Military Police (specially awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)
Specially awarded a Silver Medal.



N.W.T

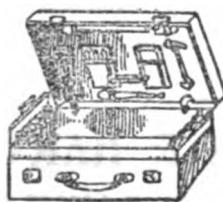
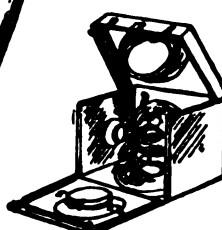
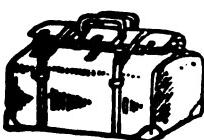
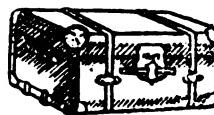
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This unique little instrument, on *entirely* new optical principles, meets for the first time the demand for a "One-Man" Pocket Range-finder which will measure, *accurately within 2%:*—

- (1) the distance of any object by means of a **short fixed base** of 5 or 10 yards.
- (2) the distance of an object of known size or height with **one observation** from **one position only**.

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Has brought hundreds of appreciative letters from officers of all ranks and arms.

In order to give every officer in India an opportunity to test this instrument *without obligation to keep it*, it will be sent immediately on receipt of remittance, which will be refunded if it is not approved, on its safe receipt back *within eight weeks* of its dispatch from England.

PRICE:—Including leather belt case Rs. 50 and Postage from England (£ 3-6-8).

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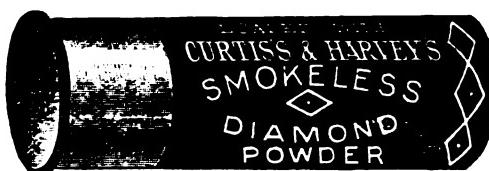
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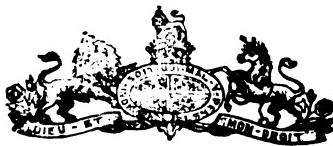
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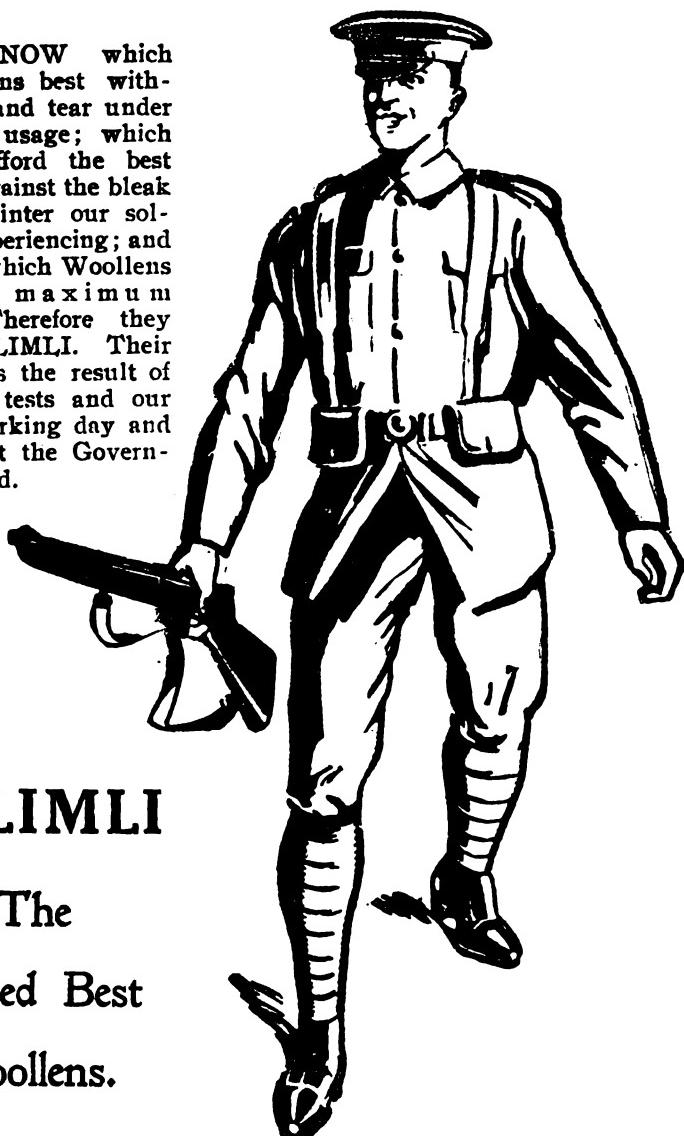
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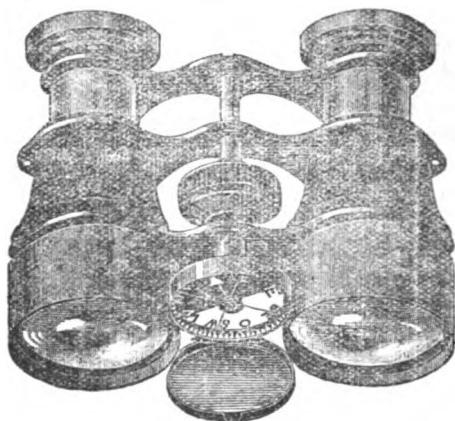
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United Service Institution of India.

OCTOBER 1916.

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Major A. C. Hobson.	F. D. Couchman, Esquire.
The Hon'ble Sir J. S. Donald.	Captain F. B. Abbott.
Captain S. L. W....	Lt. C. C. Lewis.
Lt. Colonel J. C. Lamont.	Lt. T. V. Brenan.

II.—Tactical Problems.

In order to assist officers, working for Tactical examinations, the Institution has schemes for issue to members only, at Rs. 5 each, which includes criticism and a solution by a qualified officer; 26 schemes are now available.

III.—Military History Papers.

(1) In order to assist officers in the study of military history, the Institution has sets of questions on the following campaigns.

- (a) One paper on the Waterloo Campaign.
- (b) Three papers on Callwell's Small Wars.
- (c) Two papers on the strategy of Russo-Japanese War.
- (d) Five papers on the battles of the Russo-Japanese War.
- (e) Two papers on the Afghan War, 1879—80.
- (f) Two papers on the Crimean War.
- (g) One paper on the Indian Mutiny.
- (h) One paper on the Shenandoah Valley Campaign, 1861-62.
- (i) One paper on the Bohemian Campaign, 1866, to the Battle of Koniggratz, inclusive.
- (j) One paper on the Jena Campaign, 1806.
- (k) One paper on the Franco-German War, 1870.

The charge for these papers is Rs. 5 each, which includes criticism by qualified officers.

(2) Pamphlets dealing with the Shenandoah Valley Campaign from April 1861 to June 1862, the Bohemian Campaign, 1866 to the battle of Koniggratz inclusive, and the Battle of Liaoyang, can be obtained from the Secretary, Price Re. 1 each, or Re. 1-2-0 per V. P. P.

IV.—Maps.

The Institution has for sale a variety of large scale maps, (2 and 4 inches to one mile), price As. 8 each.

They are specially useful for instruction in map reading, tactical schemes and in preparation for examination, and can be had either of English or Indian country.

V.—Premia for Articles in the Journal.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 400 is awarded for articles and reviews published in each Quarterly Journal.

VI.—Contributions to the Journal.

With reference to Army Regulations, India, Volume II, paragraph 483, and King's Regulations, paragraph 453, as amended by Army Order 340 of 1913, intending contributors to the Journal of the United Service Intititution of India are informed that action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service

Institution of India will be taken by the Committee. Contributors are, therefore, responsible that the sanction of their immediate superior has been obtained, and this should be noted on all articles sent for publication. Articles need not be submitted in duplicate.

Contributors are requested to have their articles either typed or printed.

VII.—Library Catalogue.

The library catalogue revised up to 1st January 1916 is now available. Price Rs. 2 or Rs. 2-4-0 per V. P. P. A list of books received each year is published with the January Journal.

VIII.—Gold Medal Prize Essay, 1916-17.

The Council have chosen as the subject for the Gold Medal Essay for 1916-17 the following:

"The possibility of utilizing India as a military asset to the Empire more in accordance with her size and population than at present."

The following are the conditions of the competition:—

(1) The competition is open to all gazetted officers of the Civil administration, the Navy, Army and Volunteers, who are members of the U. S. I. of India.

(2) Essays must be printed or type-written and submitted in triplicate.

(3) When a reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto, written on the outside, and the name of the competitor inside.

(5) Essays will not be accepted unless received by the Secretary on or before the 30th June, 1917.

(6) Essays will be submitted for adjudication to referees chosen by the Council. No medal will be awarded if the Council consider that the best essay is not of a sufficient standard of excellence.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in August or September, 1917.

(8) All essays submitted are to become the property of the United Service Institution of India, *absolutely*, and authors will

Secretary's Notes.

not be at liberty to make any use whatever of their essays without the sanction of the Council.

(9) Essays should not exceed about 15 pages of the Journal, when printed, exclusive of any appendices, tables or maps.

IX.—Indian Army Lists.

The Institution is prepared to supply members and units with manuscript, type-written or printed pages from old Indian Army Lists since 1800. Endeavours will also be made to procure extracts from the "Registers" prior to that date. The following will be the rates charged:—

Manuscript copy of each page	... Re. 1	0	0
Type-written copy, per page	... ...	Rs. 2	0
Printed copy, per page	... ...	Rs. 3	8
Binding if required	... ...	Extra.	

It is regretted that our former arrangement with the press has come to an end, and we are no longer able to get the printing done as cheaply as before.

If facsimile of *type* is required the price of printed pages will range from Rs. 5-8 to Rs. 3-8 per page, according to the amount of matter on each page, the higher rate being charged for pages similar to those of the Indian Army in the current Army List.

X.—War Maps.

War Maps are on view in the Reading Room of the Institution, with the positions of the troops, so far as is known, marked with flags, in each theatre of War.

XI.—Annual Subscriptions.

The Committee again invite the attention of members to the large amount of unnecessary correspondence and expense annually caused to the Institution by the difficulty in getting in the annual subscriptions.

If members wish to resign their membership they have only to notify the fact in writing to the Secretary. If this is not done, it is presumed that they wish to remain members and the Journal is regularly posted to their last known address.

Much inconvenience and unnecessary correspondence is also caused by the failure of members to notify their changes of address or to make any arrangements for the Journal to be sent after them, when they change their address.

The remedy for both these matters lies with members them-

selves, and it is for their consideration whether they agree to continue supplying the Journal to those who have not paid their subscriptions, and to have the time of their staff largely taken up in issuing reminders and trying to trace addresses.

XII.—Missing Journals.

The set of Journals of the U. S. I. of India in our library is deficient of Volume XII for the year 1883; also the copy of Volume I, for the years 1871-72, which we have is incomplete. The Committee would be glad if anyone in possession of the above copies will kindly communicate with the Secretary.

XIII.—Prize Essay Competition.

In place of the usual Northern and Southern Army Prize Essay Competition the Council of the United Service Institution of India have decided to offer three prizes of Rs. 100, Rs. 75 and Rs. 50 respectively for the best essay on either of the following subjects:—

(1) **Suggestions for removing the difficulties encountered by British Units arriving in India from the point of view of regimental interior economy and the comfort of the men.**

(2) **The application of the Training received in other parts of the Empire by British Troops to Indian conditions.**

The competition is open to all Members of the United Service Institution of India, the subjects having been specially selected with a view to attracting officers of the Territorial Force.

Essays are to be *strictly anonymous*. Each must have a motto, and enclosed with the essay there should be sent a *sealed* envelope with the motto written on the outside and the name of the competitor inside, and addressed to the Secretary, U. S. I. of India, Simla.

Essays must be received by December 31st, 1916; they should be printed or typewritten and submitted in *triplicate*. All essays are to become the absolute property of the U. S. I. of India and are subject to the rules of the Institution as laid down in Secretary's Notes No. VIII (8).

The Council reserve to themselves the right of deciding whether the essays received are up to the required standard or not.

XIV.—Amendments to Rules of the U. S. I. of India.

SECTION VI—MEMBERSHIP.

Paras 2 and 3 of the above section have been amended to read as follows:—

Secretary's Notes.

Para 2.

"Life Members of the Institution shall be admitted on the following terms:—

Rs. 75 plus entrance fee Rs. 10 (*see para 4*) Rs. 85.

Para 3.

"Ordinary members of the Institution shall be admitted on payment of an entrance fee (*see para 4*) of Rs 10 on joining, and an annual subscription of Rs. 5 to be paid in advance. The period of subscription commences on 1st January."

Para 3 (a)

All members of the Institution resident in Simla for not less than 90 days during the year will be charged an *additional* subscription of Rs. 5 per annum from the 1st January 1917.

Books received.

"First Annual Report 1915-16" of the Scots Company, Bombay Volunteer Rifles.

"War Vignettes" by Capt. H. Wilberforce-Bell.

Published by FORSTER GROOM & Co., Ltd.,
15 Charing Cross, S.W.

"Sprechen Sie deutsch" by Col. F. N. Maude, C.B. Price four pence.

"Hints for Flight Sub-Lieutenants," R.N.A.S., by "Flight Lieutenant." Price one shilling.

"How to do it. The A. S. C. Subaltern's Vade Mecum" by Major C. Abbott-Brown, late A. S. C. Price one shilling.

"Notes on Street Fighting," by Col. C. N. Watts. Price six pence.

"Arabic for our Armies" by Frank Scudamore. Price three pence.

"The Committee of the U.S.I. acknowledge with thanks the receipt of 100 books presented to the Library by Lieut.-Colonel R. J. T. Savi, 90th Punjabis."

REVIEWS OF BOOKS.

The Subaltern's Handbook of Useful Information by the author of "Rapid Training of Recruits." Gale & Polden Ltd. 2-6 nett.

It is a long time since any military manual has been published so

well suited to the wants of junior infantry officers as this little book.

Every military cadet and subaltern officer should certainly acquire it, and make himself thoroughly acquainted with its contents, and even company commanders may find in it many useful hints. We do not say that the book is perfect. Before a second edition is published, the author should give his book thorough revision. There are a certain number of errors and omissions, some points which require amplification or explanation, and a few grammatical slips, and misprints.

These imperfections do not however seriously detract from the general usefulness of the book.

The book begins with an introductory chapter, divided into paragraphs under such headings as Conduct Behaviour, Income Expenses, The Men, Non-Commissioned Officers, Off Parade, Parade, Punctuality, Saluting, Tact, Training. Under all these headings, and we have by no means given a full list, excellent instruction and advice are given, none of which a young officer can afford to neglect.

The chapter on drill is capital, and for Platoon Squad, and Company Drill, as well as for Extended Order, gives most useful programmes of movements on the parade ground, each movement naturally following on that which precedes it.

Short chapters, or paragraphs, follow on Discipline, Leadership, Moral, Mess Etiquette, and on all the various branches of military knowledge, with which a subaltern officer must now make himself acquainted. The chapter entitled "In the Trenches" is distinctly good and practical.

There are three appendices. I. List of subjects which a young officer must know. II. Glossary of military terms. III. List of common military abbreviations. Finally there is a useful index.

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**Lecture delivered before the U.S.I. of India at
Simla, on July 5th 1916,**

ON

"THE PRESENT POSITION IN THE BALKANS."

BY

Lt. C. C. LEWIS, 1st G. B. MANCHESTER REGIMENT.

I am afraid that to a certain extent I am here this afternoon on false pretences as I have been neither to Gallipoli nor to Salonika since the entry of Turkey into the war, but nevertheless the present position in the Balkans is so inextricably intermingled with the past that I hope by telling you a few facts about the past to enable you to a certain extent to judge for yourselves about the present. In order to bring the Balkans into a proper perspective it is necessary to delve deep into history. For the sake of this present lecture however I think the Russo-Turkish war of 1877 will be early enough. In that year or rather in 1878 it will be remembered that in spite of the magnificent defence of Plevna by Osman Pasha and the bloody battle of the Shipka Pass the victorious Russian Armies were at the Gates of Constantinople when the great powers stepped in and to a certain extent deprived them of the fruits of victory. The direct result of this was the Treaty of San Stefano by which Eastern Roumelia and certain parts of Macedonia, the majority of the population of which were Bulgarian, were created into a large Bulgaria. It was here that the mistaken policy of Great Britain in the near East—a policy afterwards admitted in the House of Lords by Lord Salisbury to have been

mistaken—made itself felt, the almost direct result of which in after years was the Balkan War of 1912—13. Great Britain was not represented at the Conference leading to the Treaty of San Stefano and she declared she would not be bound by it and although she was not territorially interested to the extent of a single square inch she called for a new Conference at Berlin. Lord Salisbury and Lord Beaconsfield attended the Conference and the result of it was the abrogation of the Treaty of San Stefano and the signing of the Treaty of Berlin. By this Treaty a separate province of Eastern Roumelia was created under the suzerainty of Turkey and those parts of Macedonia which by the Treaty of San Stefano had been given to Bulgaria were given back to Turkey. And thus by a stroke hundreds of thousands of Bulgarians men, women and children who had for a brief moment seen the dawn of freedom, were cast back under the Turkish yoke and condemned to unspeakable atrocities which far excelled anything which took place under the Spanish Inquisition. It will be remembered that in 1885 by a short and brilliant campaign, Alexander of Battenberg, the then King of Bulgaria, annexed Eastern Roumelia and utterly defeated the Serians—who thought it a favourable moment to attack him in the back—in the three battles of Pirot, Tzaribrod and Slivnitsa. I may say that just prior to this war the Russians had removed all their officers from the Bulgarian Army and she was left to fight and win this campaign with not a single officer above the age of 30 years. The year 1912 opened with Macedonia seething with discontent and all the Balkan nations suffering under the iniquities of the Turks. All that was wanted was some force or driving power and some leader. This was supplied by the formation of the Balkan League. It owes its origin to three of the greatest Balkan statesmen of the day—Gueshoff, Prime Minister of Bulgaria, Pashitch Premier of Servia and last but greatest of all, Venezelos of Greece. In speaking about the Balkan War of 1912—13 I intend to deal almost entirely with the part played by the Bulgarians. The victories of the Greeks,

Servians and Montenegrins were merely so many noughts which required a one before them before becoming a tangible quantity, the one being supplied by the victories of the Bulgarians in the principal theatre of war in Thrace. Bulgaria had been preparing for the war for years but she knew that her only chance was an offensive war in which it was necessary for her to win early victories. All her plans were formed on this. Her capital Sofia has not a single fort near it and the only possible line of resistance was the fortified bridge head at Semenli. The Bulgarian Army was—owing to the genius of its Commander in Chief General Savoff—one of the most highly organized pieces of machinery in existence. They have a very complete system of conscription and were able during this war to put into the field close on $\frac{1}{2}$ million men. This is 15 per cent of the entire population and excels anything that any other nation has ever done before. As shewing the intense patriotism of the people I may say that 95 per cent of the Reservists joined the Colours within a very few days of Mobilization Orders. The troops were armed with 8 mm. Mannlicher repeating rifles, the Field artillery with 7·5 centimetre Quick-Firing Schneider Creusot guns and 7·5 and 8·7 centimetre Krupp guns and the heavy artillery with 12 centimetre Schneider Creusot Howitzers. The forces operating in Thrace were divided into 3 Armies, the 1st Army under General Kutincheff, the 2nd under General Ivauroff and the 3rd under General Dimitrieff. The Bulgarian General Staff had 3 plans open to them. Firstly to attack Adrianople and seize it before war was declared. Secondly to advance on the Turks along the valley of the Maritza leaving Adrianople on their left flank, and thirdly to attack Adrianople and Kirk Kilisse simultaneously. The first plan they discarded because they were afraid of the political effect it would have on the rest of Europe. The second plan was inadvisable for several reasons, firstly it would have been dangerous to leave a large fortress like Adrianople on their flank, secondly the country was very difficult and facilities for transport bad, and thirdly they would

leave their right flank exposed to attacks from various large forces of Turks in the neighbourhood of Dedeagatch. By this plan also there could have been no element of surprise. The Bulgarian General Staff therefore decided on the third plan and on October 18th 1912 the date on which war was declared the 1st, 2nd and 3rd Armies commenced their march on Adrianople and Kirk Kilisse. I will now deal with the Turks. The Turkish forces were divided into four Armies, two in Europe and two in Asia. The two Armies in Europe were each divided into four Army Corps. The first army numbered about 230,000 and the second 330,000 men. Of the first Army the first Army Corps was at Constantinople, the second at Rodosto the third at Kirk Kilisse and the fourth at Adrianople. The second Army were mostly in reserve. I may say at once that the numbers given above existed only on paper as in reality such was the extraordinary state of bribery and corruption in the Turkish Army that although the Turkish equivalent of the D. D. O. collected the money for the 560,000 mentioned above, yet in fact the 2 Armies in Europe only numbered about 300,000. Even then the pay of the Turkish soldier was often 2 years in arrears. The infantry were armed with Mauser rifles, the Field Artillery possessed 7-5 Quick Firing Schneider Creusot guns and the heavy Artillery 12 cm. Krupp Howitzers. It will be thus seen at once that the theory that has been put forward by French chauvinistic writers that the Bulgarians won through superiority of arms is a most fallacious one. The Turkish plan of campaign was formed by Field Marshal Baron Von der Goltz and I may say at once that although the Turks attempted after the war to make a scapegoat of him yet he was in no way to blame. His plans were founded on the assumption that to all intents and purposes Adrianople and Kirk Kilisse were impregnable. This was right of Adrianople and should have been right of Kirk Kilisse as well but here again Turkey was let down by a corrupt War Office. Instead of all the forts being completed and ready they were barely started and Kirk Kilisse possessed only three forts all out of date. Von der Goltz's plan was to have

the main defensive position on a line a little to the east of the village of Chorlu along the banks of the Ergene River with an advanced position on the Maritza. This would have the double advantage of being near their own base whilst stretching out the Bulgarian lines of communication. Before advancing against this position the Bulgarians would have to take Adrianople or Kirk Kilisse or come round by the southern route and thus have all the disadvantages I have mentioned before. In any event Von der Goltz's plans were not carried out since as soon as war was declared a strong Turkish column advanced on the Bulgarian frontier from Kirk Kilisse. This of course was fatal to the Turkish plan and as soon as it was known the famous war correspondent, Lieutenant Wagner, wired to his paper the *Reichspost* "By orders of the Sultan the Turks are advancing; this means certain victory for the Bulgarians". After the war the Turks declared it was but a reconnaissance in force to make the enemy deploy and to find out his strength. Be that as it may the reason why reconnaissances in force have apparently fallen into disrepute with modern tacticians shewed itself here. The Turkish column was unable to extricate itself and a battle was forced on it in which the Bulgarians were completely successful. The Turks then fell back on Kirk Kilisse. It may occur to some that the Bulgarians might have outflanked Kirk Kilisse by going round to the North but this was impracticable as the country is broken up by the Istrandza Dagh Mountains and is very woody with no roads and movements of large—or in fact of any—bodies of troops are impossible. Now although it was not as I have said before fortified as it should have been yet Kirk Kilisse is naturally a very strong defensive position. Not even the most blatant optimist on the Bulgarian side nor the blackest pessimist among the Turks ever dreamed it could be taken in the first rush. But this was what was accomplished by the brilliant charges of the Bulgarians. The assault took place at dead of night in a terrible thunder storm and the Turks were completely routed. Their leader Mahmoud Muktar Pasha did at any rate one good thing for his country in com-

mitting suicide and Abdullah Pasha took command of the Turkish forces. It was the Bulgarian 3rd Army under General Dimitrieff who were responsible for this victory and they were immediately afterwards reinforced by the 1st Army, the 2nd being left before the walls of Adrianople. Now it is a well known military fact that a defeated army retreats on lines parallel with the attackers' advance and this is what the Turks did here, their right flank resting on Bunar Hissar, their centre on Lule Burgas and their left on Baba Eski. The Bulgarians advanced on this position without delay and counting reinforcements received from the 2nd Army one can estimate their numbers at about 240,000. The tactics of the Bulgarian Artillery here were worthy of much praise as instead of being drawn into a duel with the Turkish Artillery they pounded the Turkish Infantry and as soon as they had to a certain extent demoralized them their own infantry was let loose. This battle will long remain one of the most glorious in the history of Bulgaria. The courage of the men was sublime. Whole battalions hurled themselves at the enemy from a distance of 400 yards on the word of a sergeant. Their moral had been raised to such a high pitch by the victory of Kirk Kilisse that the bare idea of defeat never occurred to them. The fighting all along the line was terrific but the Turks simply could not live against the impetuosity of the Bulgarians. The battle which was one of the bloodiest known in history lasted 4 days during which time there were 120,000 casualties about 80,000 being killed. There were practically no wounded and no prisoners. The result of the battle was the complete rout of the Turks whose leader Abdullah Pasha sank into oblivion. The only expression which really describes the condition of the Turkish forces after this battle is that they were completely "fed up" with everything. They did not run away, they walked away, their one idea being to put as much space as possible between themselves and the Bulgarians. Complete disorganization reigned and those who witnessed their retreat to the Chataldja lines

never dreamed it possible that any power on earth could reorganize the demoralized mob. But in fairness to the Turks it must be said that the defeat was not due to lack of courage, or rather it is better to say that they laboured under every disadvantage possible. Scores of instances occurred of flour being served out for gunpowder and of wooden bullets. Although it was bitterly cold—there being 2 feet of snow on the ground—they had no overcoats and their food supplies had failed. Everywhere the effect of the appalling corruption at Headquarters was apparent and under the same conditions it is safe to say that no troops in the world could have stood up against the Bulgarians. On the other hand, given well disciplined troops well fed, clothed and armed, and the Bulgarians from the impetuous way in which they charged would have been annihilated. It was indeed fortunate for Turkey that at this very critical juncture a strong man should have appeared on the scene. Nazim Pasha succeeded in the impossible; he stemmed the rout and reorganized the Turkish forces behind the Chataldja lines. The Bulgarian General Staff have been repeatedly blamed for not pushing on more rapidly and penetrating the Chataldja lines before the Turkish could be reformed but there were several reasons for this. Firstly their men were naturally exhausted after the very strenuous fighting they had been through, secondly the Bulgarians did not deem it possible for the Turks to be reorganized so quickly and thirdly it naturally took some little while to make provision for their supplies coming up, but the fact remains that when at last they did appear before the Chataldja lines they found the Turks reorganized, reinforced and ready to receive them. The Chataldja Lines are one of the most strongly fortified positions in the world. The distance along them from the Sea of Marmora to the Black Sea is about 23 miles, but owing to Lake Derkos on the north and Buyak Chekmedje on the south only about 15 miles has to be defended. There is a perfect net work of forts right across although it is true some of them are very much out of date. The

famous Belgian General Briault was the engineer responsible for the modern defences. As will be easily seen from a map these lines present an almost insuperable barrier to an attacking force not possessed of sea power to turn the flanks whereas in this case what fleet there was amongst the belligerents was owned by Turkey who about 2 years before the war bought two gunboats from Germany for £750,000 each. In spite of many ferocious attacks which ended in an appalling—and needless—waste of life the Bulgarians never succeeded in forcing the Chataldja lines and the first war ended in a sort of stalemate. I have unfortunately no time to tell you about the terrible political blunders made by the Bulgarian statesmen in the second phase of the war which resulted in the marvellous skill and bravery of the Bulgarian army and the genius of its Commander in Chief—for no military critics are able to point their finger to a single tactical blunder made by General Savoff and his staff—being wasted, to Turkey recovering much of her lost territory, and finally to Bulgaria being beaten to her knees by Rumania who having escaped all the fighting yet managed to come in for the spoils.

I will now deal shortly with the various countries in the Balkans at the present time. First of all Turkey. I have, to my utter amazement heard many officers back from Gallipoli and Mesopotamia remark on the fairness with which the Turks have fought and their kind treatment of the wounded. The Turkish soldier or at any rate the ones who police Macedonia are the most bloodthirsty and cruel scum—and there is no other word to call them—in the world. I have not infrequently seen these Bashi Bazouks wearing necklaces of the fingers of babies whom they have killed on some marauding escapade. The system of taxation in Turkey lends itself to these practises. Taxation is levied by means of a tithe placed upon the crops. The right to collect this tithe is sold by auction and naturally the man buying it has to make a profit with the result that very often more like double is collected. If a man refuses to pay he is not allowed

to farm his crops, but in any event the Bashi Bazouks who are sent to assist the collector always commit the greatest atrocities and excesses in the process. Just take the treatment of the Armenians. Before I left England in February I heard officially that up to that date the Turks had slaughtered in cold blood 1½ million Armenians since the commencement of the war and I am now informed the total has reached 2 millions. In one afternoon in Trebizond 10,000 men, women, and children were put to death by drowning. Again take the appalling treatment of the Syrian Christians by the Turks. It is little wonder that those of us who have seen some of these cruelties are astounded at the apparent complete reversal in the Turkish character. There is very little doubt that what with the constant quarrels between the young Turks and the Old Turkish party the nation as a whole is quite ready for peace in the hope of drawing perhaps a brand or two out of the burning and it would not be surprising to see Turkey sue for peace at any time. Next dealing with Bulgaria. There were two factors which led this country into the arena. Firstly king Ferdinand, who is of course a German, and secondly the wonderful way in which the Wolff bureau "worked" the Bulgarian press. Reading the Bulgarian papers one began to have serious misgivings as to whether the British were going to win. Battles both by land and sea all of which were victories for the Germans—and which I need not add had never taken place—were reported at length and it is little wonder that the Bulgarians came to the conclusion the Germans were winning and winning easily. Then again there appears no doubt that we could have bought Bulgaria if we had cared to pay the price *i. e.* cash and territorial gain. It is true the latter was to be at the expense of Servia, but Servia had agreed to it on condition she was recompensed in Bosnia and Herzegovina. King Ferdinand certainly has done a very great deal for his country. Sofia the capital, from being a mud heap is now one of the cleanest, best built and best paved cities I have ever visited. Her system of electric trams is perfect and 7 years

ago she had the telephone system without any exchange as in Simla. The population of Sofia when Ferdinand came to the throne was 20,000; now it is 120,000. However Bulgaria has not yet recovered from the effects of the wars of 1912-13; the whole nation is tired. Let it once realize the fact that it has been misled and there will be a tremendous internal upheaval with the King suffering the same fate as the greatest of all Bulgarian statesmen, Stambuloff. In the war of 1912 the Bulgarians were suffering under centuries of oppression and they considered it a holy war. But their hearts are not in the present campaign and if and when our men come up against them they will find troops very different from the splendid victors of Lule Burgas and Kirk Kilisse.

Coming now to our Allies. The splendid fight put up by the Servians in the early part of the war is still fresh in our memory. With the same advantages possessed by the Boers *i. e.* knowing their country and being fine marksmen they have left their mark on the Austrians. If I may be allowed to say so it has always struck me as being a little unfair that Belgium should have received such tremendous sums to relieve their misery when the Servians who have suffered quite as much and have had their country devastated seem to have been almost forgotten. At the present time there is hardly a single Servian in Servia so completely has their country been overrun by the enemy and one can only hope that at the end of the war they will receive a full and fitting recompense with the fulfilment of their national hopes and aspirations.

The Montenegrins are a people who have one hobby, that is fighting. I believe that if there was a war between Iceland and Finland, Montenegro would deliver an ultimatum to one or both of the nations so keen are they on a "scrap"; and fine fighters they are too, as the Austrians will bear testimony. Their King, Nicholas is a splendid type and I would mention as being of possible interest to any members of the Indian Medical Service who may be present that

he is about 77 years old, is one of the finest riders and best shots in a country noted for its horsemen and marksmen, smokes between 120 and 150 cigarettes a day, inhales, and has done so for 40 years. The way the King goes about among his people is splendid. Prince Danilo his eldest son is worthy of his father and has already exhibited fine traits as a leader of men. Nor must Montenegro be entirely forgotten where diplomacy is concerned. The way in which she craved for an armistice with Austria for 2 days whilst she discussed peace terms meanwhile extricating the King and the army from a very nasty situation was an astounding piece of work.

Coming now to the neutrals, I am of course debarred from saying much that I could wish about Greece though there is no question that its people are for the most part friendly to the Allies. Venezelos is of course uncompromisingly pro-allied and has a large following and it certainly looks as if our diplomacy here had been successful and that at any rate Greece will not come in against us.

Lastly Roumania. Here again the majority of the people are for the Allies. Roumania is simply sitting on the fence waiting to make quite certain who will win before casting in her lot on that side in the same way as she did in the Balkan War. As soon as she is absolutely certain who will win she will come in and it is not too much to say that the entry of Roumania into the conflict will be one of the most certain signs that this most terrible of wars is drawing to a close.

**Lecture delivered before the U.S.I. of India on
20th July 1916**

ON

"MACHINE GUNS IN FRANCE".

BY

MAJOR B. N. ABBAY, 27TH CAVALRY.

I am going to give a general account of Machine Gun training, fighting and tactics as carried out in France. In one lecture it is impossible to go into detail and I shall only touch detail where it involves innovations of importance to Machine Gunnery.

Very few people, who have not been under Machine Gun fire, realise how overwhelming its effect is and what a sense of powerlessness to resist it produces. If its effect from the front was the same as from a flank, men could not face it or advance, but coming from a flank, Machine Gun fire destroys men without their realising it; only when they are held up in the open and hear a gun traversing towards them does their moral suffer occasionally. Machine Gun fire depends for its effect on:

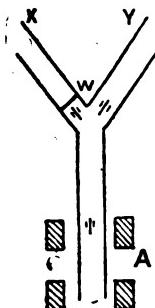
- a. Surprise.
- b. Flank effect.

If we knew where a Machine Gun was going to fire from when we attacked, we should knock it out before we attempted to advance, so the very existence of the Machine Gun depends on our ignorance of its whereabouts, *i. e.* surprise.

The cone of Machine Gun fire is very deep but very narrow, so that it requires a deep formation to be effective against, for instance:

- a. Infantry in fours or column of route for frontal effect.
- b. Enfilade fire against lines of skirmishers.

I will give you an instance of frontal and of enfilade fire, which occurred during the present war.



The British held village A with a Machine Gun firing up each of the roads W. X. and W. Y. with a few men. At dusk a Regiment of French Cavalry came down the road X. W. and reported that Battalion of French Infantry was following. Just after dark a body of Infantry wearing French uniforms and singing French songs came towards W. The Company Commander at W. had the barricade removed and went out to meet the advancing Infantry, he was immediately knocked down and bayoneted and the Machine Gun and party on the road W. X. were also rushed and destroyed. The Machine Gun on the road W. Y. got away and came into action at the entrance to the village, where it fired over a line of men lying down across the road. The Machine Gun only fired when the men fired rapid, so as to conceal its position, and worked on the fire orders given. During the night another Machine Gun was brought up. The Germans attacked all through the night in masses but could not reach the guns and finally gave up the attempt. In the morning the road A. W. was found to be literally choked with Bosche carcases and the Machine Guns had fired 18,000 rounds.

On September 25th the Brigade, to which the Battalion I served with has the honour to belong, was ordered to attack. The Brigade was formed in three lines in assembly trenches a short way behind our firing line.

Our advance bombardment was not heavy as all the guns were firing towards the south at the Dump near Hulluch.

The Gas attack failed, much of the gas coming back

into our own trenches.

At the given time, the first line stormed out over the parapet, and as they did so a Bosche climbed on to the German parapet and presented arms to "those about to die"; the line was met by a heavy Machine Gun fire, very few reached our own firing line and only one, a huge Scotsman, reached the Bosche trench where he was shot on top of the parapet as he lounged with his bayonet at a Bosche in the trench below and there in March he still knelt on the parapet leaning against the butt of his rifle.

The second line also went over with a great rush and many got half way across no man's land, here about 80 to 150 yards wide, where they were shot down in platoons and their dead still lie, their ranks so straight and perfect that they might have been dressed before dying. Only one platoon reached the German trench; they were seen leaping down into it and were never seen again.

The third line was held back as the result of a message sent back by a wounded officer lying just outside the Bosch trench; for this he received the D. S. O.

So in a few minutes a magnificent Brigade had ceased to exist, wiped out by scientifically locked fire.

The lesson of these examples is that if you attack well placed Machine Guns without first knocking them out by a preliminary bombardment, you must and will fail.

It is now recognised that it is possible to face and advance against artillery fire but not against Machine Gun fire.

"LOCKING THE FRONT"; "CRISS-CROSS FIRE"; "BARRAGES".

Machine Guns enable us to save men, and the more effective your Machine Gun work is, the more men you will save. Experience shows that "locking the front" is the most effective way, accordingly we lock our front with Criss-Cross fire or as the newspapers say we put down a barrage.

The following is a good definition of a barrage—

To "lock your front" is to place your Machine Guns so that the enemy cannot reach your trenches without passing

through 2 or 3 lines of Machine Gun fire and so that the guns give mutual support to each other.

The emplacement from which a gun is fired in case of attack is known as its "battle position". No gun is ever to be fired from a battle position except in cases of attack, though guns other than "key guns" may be moved short distances away and fired. This does not mean that the gun is to be kept mounted, poking over the parapet. Disappearing mountings or concealed emplacements should only be used or your gun will be destroyed. Common sense is necessary in handling Machine Guns as well as any other weapon. Key guns are generally kept mounted, others never.

In this as in most machine gun work we are better than the Germans, who do not hesitate to fire from their battle positions; to say a thing is good *because* the Bosche does it is absurd.

We, by the way, are the discoverers of the Machine Gun, and not the Bosches, though our Civilian Government has cut us down below the efficient minimum as regards numbers of Machine Guns and allowed the German to get ahead of us in mere numbers.

A "key gun" is a gun placed to fire over a particular piece of ground which can only be swept by that gun; if that gun were removed there would be a gap in the locking system. On the La Bassée Canal are some beautiful instances of key guns.

There are two bad faults frequently committed in Machine Gun emplacement fighting.

- a. In bombardment, if an emplacement is destroyed, Gunners forget that, emplacement or no, the place where the emplacement was, is the important point to lock from, and are apt to move their guns to other places and so make a gap in the locking system.
- b. Another fault, a most serious one and one to which half trained troops and native troops are particularly susceptible, is that of swinging their gun

Machine Guns in France.

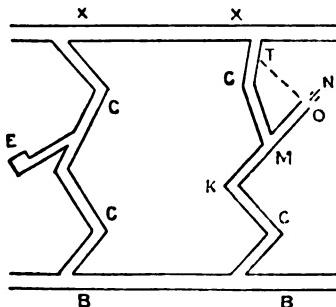
round and firing to their front because they do not trust their flank guns to cover them, the result is that a large gap is opened for the enemy to advance through, and our fire being frontal becomes futile in comparison to what it should be.

I feel so strongly about this that I would never trust a "key gun" to a doubtful crew unless a British Officer was at hand.

If officers insist on having their front locked as it can and should be, *they have nothing to fear from counter-attack* until the new line has suffered a thorough preliminary bombardment and been obliterated, and I believe that where counter-attacks have succeeded without bombardment, the Machine Guns have not been properly employed to lock the front.

The whole Western front from Nieuport to the Swiss Frontier is locked by Machine Gun fire; if the Bosche breaks through our front line he will find every open space under Machine Gun fire and the front of the support trenches locked by Machine Gun fire; should he force the support line, he will find both the reserve line and the village line securely locked. Should he attempt to attack down a communicating trench he will find himself taken in the back by Machine Guns firing from dog's legs (*sketch below*). Your guns are therefore wanted for several lines. Never put *all* your guns in the firing line.

Avoid the heads of salients and re-entrants, any obvious place, or an emplacement which can be given away by an aerial photograph.



REASONS FOR FORMING MACHINE GUN SQUADRONS AND COMPANIES.

1. Regimental Commanding Officers sometimes persist in moving and interfering with guns placed by Brigade M. G. O's., thus destroying the locking system.
2. Each Regiment considers its own front the most important and causes trouble if its guns are sent elsewhere.
3. There being no organised Machine Gun "thought," no two Commanding Officers have the same ideas as regards the handling of Machine Guns; the result is chaos. Machine Gun Commanders and Machine Gun officers are all trained on the same lines and can therefore work to each other. The formation of Machine Gun Companies and Squadrons prevents all this interference and unguided thought.

So far as the men are concerned in a Machine Gun Company or Squadron:—

- a* they are treated as specialists.
- b* better looked after; one has only to see Machine Gunners on service to realise this.
- c* Machine Gun *esprit de corps* is created which is very valuable.

To sum up. If you want your Machine Gunners to succeed, more especially in the offensive, which is the *most difficult work* Machine Gunners can be called upon to carry out, you must train and keep them as specialists.

You will have fewer casualties because the Machine Gun organisation will be so arranged that only the smallest number of men, generally 2, are near the gun; the rest being kept under cover either with the ammunition or with the half way link.

Modern Machine Gun tactics require training and continuous training; they are always changing just as naval tactics, and to leave them for even a short time is to get out of date.

The history of Machine Guns may be divided into three phases. First during the great retreat to the Marne and after the German defeat during our advance to the Aisne, Machine

Guns saved us again and again, but their great effect was not fully realised because of the wonderful rate of fire the regular soldier was able to pour in; For instance, the Worcestershire Regiment could fire an average of 18 aimed shots per man in a minute.

As the trained soldier was killed off and his place taken by a less highly trained man, the rate of infantry fire deteriorated and the full value of the Machine Gun was realised, *i.e.* the worse your troops the more work for your Machine Guns ; and the more Machine Guns the more you can save your men. It was during the retreat that the trick of only firing Machine Guns when the infantry was firing rapid was adopted, so as to conceal the position of the Gun.

Second phase; from the end of the German retirement to September 1915; the exact date of this period varied on different Fronts; when our Artillery was far inferior to that of the Germans, and we were hanging on unable to reply to their artillery fire. During this period to employ your Machine Guns unless absolutely necessary meant that you got your trenches in the vicinity of the Machine Gun shelled to pieces by the Germans for no purpose, so that to fire Machine Guns unless for special reasons was asking for your men to be killed.

Third phase; after September 5th 1915, when the British Artillery had become superior to German Artillery and we had ample ammunition and were then able to fire continually, General Officers appreciated Machine Gun firing and entirely discountenanced the opinion that long range Machine Gun fire is waste of ammunition.

About this time, an amusing incident occurred; we found four Germans sitting in the branches of a tall tree, dressed in invisible clothing, and turning a Machine Gun on them at 700 yards forced them into the top-most branches, and there killed them, in spite of their futile expostulations.

The idea that Machine Gun fire should be used to disperse gas is wrong. This practice is merely a waste of ammunition at a time when it is especially needed.

As soon as the opportunity could be found a Machine Gun school, without doubt the finest in the world, was started at Wisques, near St. Omer in a large convent where Machine Gunnery is taught unencumbered by musketry experts. It is realised that officers must be trained before they can be Machine Gun Officers, and that only a school will do this. This school was the original source of British Machine Gun tactics and it is to the credit of the Staff that the tactics first evolved by them are still basically sound.

The buildings are ideal for such a school, the one defect being a total absence of washing arrangements. What the nuns did I don't know.

It is curious how the odour of sanctity has given way to that of rifle oil, how saints are decorated with the latest thing in Machine Gun belts and what a fine lecture room the chapel makes. The vaults have been turned into an arsenal of all sorts of Machine Guns and Machine Rifles, including many German Machine Guns used for instruction or being converted for our own use.

The Staff is formed of regular officers, the Instructors are men from the Artists' Rifles, and excellent they are.

The ordinary course lasts three weeks, when everything that can be imagined in connection with Machine Guns is gone into. From time to time lectures are given to senior officers.

It was largely due to the exertions of the Wisques Staff that the formation of Machine Gun companies and squadrons was adopted, in the face of opposition similar to that shown to the formation of signalling companies in India a few years ago.

This change has been recognised as essential by Machine Gun officers ever since the Germans formed Machine Gun batteries in, I think, 1903.

A most valuable range card for use against aeroplanes has been drawn out at Wisques. To be successful a highly trained personnel is essential and the Machine Gun Officer must have the range card at his finger tips and he must

have luck.

Close to Wisques is an aerodrome and from information gained from the flying men as they come home at night it appears that Machine Gun fire is very nasty at 6,000 feet and unpleasant at 8,000 feet altitude. It is now stated that shooting at aeroplanes with Machine Guns is waste of ammunition, presumably because they fly much higher now than they did and all important parts are armoured. Machine Guns should never be fired until the range has been ascertained accurately and *range cards for offence and defence must always be made.*

With the old mekometer, with two men bleating to each other at the ends of a string, this is generally impossible under modern conditions; but with the new Barnes and Stroud, an extraordinarily accurate and handy instrument, a very high degree of speed and accuracy can be obtained without exposing the range finder.

This instrument is said to be easily damaged, but firm discipline will stop this.

Constant practice is necessary and range finders when once trained must be kept as range finders and not put to digging or other severe manual labour; only steady men of sober and reliable disposition should be employed as range finders.

The best, I ever saw, was a scientific instrument maker, a non-smoker and teetotaler but a magnificent and reliable range finder.

The old idea that the Machine Gun should be used for range finding is utterly wrong because:—

- a. It gives the Machine Gun position away.
- b. The enemy know what you are ranging on.
- c. It is very inaccurate because no two men shoot a Machine Gun alike.

There are two kinds of Machine Guns and one automatic rifle in use by the British in France.

The Maxim, which is well known in India, is now only a gun of position.

The Vickers, a new and light improvement on the Maxim,

weighing about 24 lbs. and fitted with a light tripod in addition to the ordinary one.

The Vickers is very useful for cavalry as a man can take it up in front of him on his saddle and gallop into action across country, while a second man brings up 500 rounds, in 2 belts, on his shoulders.

It is easily seen how useful this would be in pursuit or retirement. For infantry, its lightness enables them to take it into the firing line, and to move it quickly about the trenches.

A periscope can be fitted to it.

The Lewis gun, really an automatic rifle, to be used as such and not as a Machine Gun, fires 40 rounds from a metal drum. Replacing the empty drum by a full one takes 4 seconds.

The rate of fire is faster than the Vickers, in fact it is too fast, and efforts are being made to reduce it.

It is fitted with a light tripod; heavy tripods can be obtained for trench work, but personally I am opposed to their use; the Lewis Gun should be used as an automatic rifle and not as a bastard gun. Trained men fire most effectively with it, but require constant practice.

The writer has seen over 900 rounds fired as fast as possible from a Lewis without accident.

The Lewis gun is in its element in crater and trench fighting, where it stiffens the already locked front.

It belongs to the Company and not to the Machine Gun Company, it will be sent forward with the attacking line and is not to be held back by the Commanding Officer as a support or reserve, the Machine Gun Company do that work.

I feel sure that the fire power of 16 Machine Guns is not realised; at the lowest it is equivalent to 800 men, yet how often do you see an officer comparatively ignorant of Machine Gun tactics, a novice in the science of Machine Gunnery and entirely ignorant of the principles of scientific

gunnery put in charge of this big command?

The good Brigade Machine Gun Officer, now Machine Gun Commander, is the hardest of all to find. Frequently he is an untrained child, a child ignorant of the elements of tactics, organisation or the handling of men. To be successful a Brigade Machine Gun Officer must have boundless energy and enthusiasm, he should never know where his bed and billet are, he must always be thinking of how to kill Bosches, he must be able to carry in his mind the aerial map of the country he is fighting over and he must have a good eye to country; this last is all important, and can, I feel sure, only be obtained and retained by constant riding to hounds or pig.

The Brigade Machine Gun Officer is responsible that the Brigade front is always locked by "criss-cross" fire, and that the flank guns are locked with those of the neighbouring Brigades or Divisions, so that not a yard of the whole front is unswept by Machine Gun fire.

Should there be dead ground that he cannot sweep he informs the Artillery so that in case of attack, they will pay this dead ground especial attention.

In an advance he organises the defence against counter-attacks and makes certain that his front and flanks are locked.

He is responsible for sending forward the guns in the attack and he remains close to the General Officer Commanding.

Here a point comes out. Once a position is fixed on, it is a mistake to start nibbling, taking 50 yards here or there, unless they are considerable tactical advantages to be gained, because these small advances dislocate the locking system which covers your Front and you may be counter-attacked before it is readjusted.

The same is good of a retirement.

Staff Officers must not interfere with Machine Gun Officers; there was a typical case of such interference in one of the Hooge Chateau fights.

The Germans held Hooge Chateau or rather its remains, and trenches in the grounds, we had just taken the stable and outhouses. In the stable was a window; an order was sent up from behind that a Machine Gun was to be placed to fire from the window and it was not to be moved. A Machine Gun was taken into the room and an attempt was made to mount it, but a storm of bullets came through the window and the gun was hit.

Efforts were made to sandbag the window and to fix steel loopholes, but without success; the gun never got into action.

The next morning it was found that a Bosche Machine Gun had been mounted 5 yards from the window and that the order to mount our Machine Gun in the window could not be carried out.

No Machine Gunner would mount a gun in a single window.

Thus owing to interference a Machine Gun, that was badly wanted elsewhere, was wasted.

Trust your Brigade Machine Gun Officer. If he is no use, sack him; a bad Machine Gun Officer is a great danger.

MACHINE GUNS IN THE OFFENSIVE.

So far the lessons learnt show that to attack trenches without a preliminary bombardment to knock out the Machine Guns is to send your troops to certain destruction, because Machine Guns are supreme in the defence and will only yield to artillery. We will now consider the tactics of Machine Guns in the offence. If it is impossible to carry out a preliminary bombardment, nothing but a gamble with bayonet and bombing parties remains; these parties go forward to try and knock out the enemy's Machine Guns. With luck, they will destroy a few.

Before the offensive takes place the Machine Gun General

Machine Guns In France.

Commander should take his Machine Gun map to his General Officer Commanding so that the artillery may be directed to pay special attention to those particular spots where Machine Guns have been located. Machine Gun maps show the position of every Machine Gun reported by observers or patrols, and if made with care and common sense are obviously very valuable. They contain the observations of months. The old idea that Machine Guns cost so many pounds and therefore must not be risked, is exploded. The firing line and advance guards must be supplied with ample Machine Guns and Lewis Guns. Lewis guns go with parties feeling the way. Machine Guns with those who will be brought up to force their way through. In other words Lewis guns with vanguards, Vickers with main guards.

This of course, does not mean that Machine Guns and their sections are to be pushed out into the middle of a plain with the firing line; if this is done, they will cease to exist. As regards trench fighting, it is as a rule a mistake to send Lewis or Machine Guns with the first line, but once the first line has occupied the trench attacked, Machine Guns and Lewis guns must be rushed up to lock the front.

In broken or wooded country Lewis guns can be pushed forward with the firing line or even with the skirmishers.

Great latitude should be allowed the Machine Gun Commander as to the time and manner of advance, once he thoroughly understands the idea and the situation.

The Germans took their guns forward between the second and third line with little success.

The proportion of Guns in an attacking force is roughly:—

1-3rd with the Firing line.

1-3rd „ „ Supports.

1-3rd „ „ Reserve.

In the advance, guns with the firing line must be

handled with great boldness and every effort must be made to enfilade parts of the enemy's line. Enemy Machine Guns are best dealt with by parties especially told off to destroy them or by Lewis gun parties.

Guns with the firing line are under the Officer Commanding the Regiment with which they are employed, in the same way that artillery might be.

Neuve Chapelle furnishes a splendid instance of bold Machine Gun tactics in the firing line.

During the advance when the Indian Division was held up, a British Officer went forward by himself with a Machine Gun to a house from which he enfiladed the Bosche line, forcing them to retire and enabling us to push on. This officer was wounded, and in attempting the same feat during the second battle of Ypres was killed.

In very open country, it may be necessary for Machine Guns to be sent on under cover of darkness to dig themselves in or to conceal themselves until the infantry advance commences, when the Machine Guns come into action. Experience shows that guns concealed in this way are hard to find, capable of stopping powerful attacks and afford effective covering to our own.

The Machine Guns in support carry out covering fire or fire on communication trenches or roads in rear.

They must be ready to go forward and lock the front as soon as the position is taken.

In flat country they should be used from a flank or if not possible, made to fire away to left or right so as to enfilade a distant part of the enemy's trenches; a study of the angles of descent will show the place for the gun as regards the trenches to be enfiladed.

The old idea, when guns were scarce, was that "Machine Guns in reserve" should be actually under cover and not fire until sent in by the General Officer Commanding. The more modern idea is to use them for long range firing at communication trenches but they must be ready to move up instantly.

In the battle of the Aisne our men were unable to

advance as they had no artillery support, whereupon 2 Machine Guns came up and firing over the heads of our men, shut up the Bosches, who fled under our Machine Gun fire, when our men got to within 60 or 70 yards of them.

In the offensive, to take your sections into action with the gun is murder, they must be kept well away, two men are enough to work a gun, and eighteen inches sufficient cover to mount and bring into action any Machine Gun.

Brigade Machine Guns may be used with great effect at night to spray squares of country taken off the map.

Sections of road behind the enemy's line may be be fired on and scissored.

There are many instances of this sort of firing being successful at over 1,800 yards.

EMPLACEMENTS.

Of all the emplacements in use on the western front only 3 are worth mentioning here.

1. The double chimney. This is really a large chimney inside a second chimney, the space between the two being about 18". The idea is that a big shell striking the outer chimney will burst and lose its force before it strikes the second or inner chimney. This has been used with success on the La Bassee front.

2. Rat-hole emplacement. These consist of a deep dug-out under the parapet with passages running out and coming up in, or in front of, the barbed wire entanglement in four or five places, so that if one or two are destroyed the Machine Gun can be mounted from another hole. This sort of emplacement caused us great trouble in the attack on the Dump in September.

3. Cellars. Machine Guns mounted to fire through cellar windows on the level of the ground. It is very difficult to destroy these and it was Machine Gun fire from the cellars of Givenchy Church keep that saved the situation when the Indian Division was driven back in December 1914.

TRENCH MORTARS.

Machine Guns may be used in combination with Trench Mortar fire. My regiment which was one of the first to have the

new Trench Mortar, firing 35 eleven pound shells in a minute, attached to them, scissored a portion of German front trench. As the scissors closed, great confusion was heard in the German front trench and the Germans unable to face the mortars any longer climbed out of their trenches and ran away across the open where they were shot down by our Machine Guns. A very pretty piece of combined tactics.

I do not believe in playing tricks with Machine Guns such as using them for sniping; a succession of shots from one place, even at short intervals of time make the position liable to be located and you lose, by a trench mortar-bomb or rifle grenade, a Machine Gun in doing what a fixed rifle could do equally well, if your men have been taught how to set them.

To fire successfully and scientifically you must have proper instruments; with instruments Machine Gun fire can be brought to bear on and search almost any locality, and barrages, of course, are simply a matter of ammunition.

A study of aeroplane maps will always be worth while as from it, bomb stores, emplacements, latrines, communication trenches easy to enfilade, can be picked out and these furnish tempting targets to the keen Machine Gun Officer.

Telescopes, masks, more especially for companies of British and Indian Sections, when both should be made to wear them, clinometers, levels, for the old pattern Machine Gun, one-man range finders, and the new Machine Gun protractor, are no longer luxuries but essentials if Machine Guns are to be used to their best advantage. Some of these instruments are being replaced by dials on the latest gun mounting.

The Germans in their preparations for our great offensive have removed whole villages so that no target is left for our artillery, and spotting becomes difficult.

We may expect to find large numbers of Machine Guns hidden in the cellars of dismantled houses for use at the last moment, and in big dug-outs cut in the chalk hills.

Again there is only one answer to machine Guns and that is Artillery, Artillery, Artillery.

To sum up:—Machine Gunnery is a progressive and

Machine Guns in France.

exacting science depending, for its normal and continual progression, on the vitality and youth of an army.

Old age, slow-thinking, narrow-mindedness and inaction are anathema to it, forming a cancer, which will certainly strangle and render ineffective the most recent and important growth in the modern army.

The key to Machine Gunnery may be found in the words of the Master, "action, action and again action".

After the lecture the following remarks were made.

MAJOR CASSON:—Major Abbay has pointed out to you most ably the necessity for the training of, and the qualifications necessary in, Machine Gunners and Machine Gun Officers. I wish to draw your attention to a few of the difficulties experienced by Divisions in keeping up the supply of these officers.

It must be borne in mind that the casualties among machine gunners are exceptionally heavy. You all know what they have been in the infantry, but the toll paid by the machine gunner is far heavier. After the Loos fighting the Brigade Machine Gun section of the Brigade I was with was commanded by a 2nd Lieutenant and this was the third occasion on which the section had been practically wiped out. And without Divisional organization for training, I do not know how we should have been able to keep up sufficient teams with which to man the guns in the Brigade.

Brigade Machine Gun sections had been started in nearly all if not all the Brigades in Force 'A' in France as early as May and these served as an elementary school to ground men in the technicalities.

Wisques was a great boon and gave us most valuable Machine Gun Officers but it was soon found to be absolutely inadequate. So we then started Divisional Machine Gun schools, and I believe though I am not certain that the Indian Corps ones were the first started in France. Even with these it was at times very difficult to keep pace with

the casualties.

Another factor which added enormously to the difficulty in the Indian Army was the paucity of sufficiently senior officers who could be spared from their regiments from which to make Brigade Machine Gun Officers. The Home schools *i. e.* these in England and India are not satisfactory for the higher tactical training which is necessary. They lengthen the time officers and men are kept away from the fighting line (and this applies particularly to Mesopotamia,) and they cannot be got at so quickly if required at the front. The schools are not in touch with the latest developments and the whole environment is not that of the country in which you are fighting. The schools should be as close to the front within reason, as possible.

Owing to casualties we had to start Divisional classes in the Division with which I was serving in Mesopotamia. But the difficulties were great owing to the short period of rest and the very low strength of the units. Classes had to be cut down to a fortnight which meant increasing the hours of work per day which was trying in such a climate.

In one case a class had to be broken up after 12 days. And in the last heavy fighting about Bait 'Isa some of the guns were manned by young officers and men who had only had the above training. This may have accounted for some of the heavy casualties suffered by our Machine Gun teams at that time, our greatest casualties being suffered while on the defensive. After this fighting some guns were out of action for want of teams.

It would be a great help if before being sent out to the front all young officers could be trained in India in the technical handling of the machine gun. We should then have plenty of material on which to draw and the Divisional and other schools in the theatre of war could confine themselves to the tactical handling of the gun.

MAJOR GENERAL KEMBALL:—The lecturer has been speaking specially of warfare in Western Europe, but as Mesopotamia

Machine Guns in France.

has been mentioned, I should like to make a few remarks.

I understood Major Casson to say that the heavy casualties among the Machine Gunners in Mesopotamia were chiefly due to the want of training of the young officers in command of Machine Guns.

In my opinion the heavy casualties among the Machine Gun detachments of which I had knowledge, were due to altogether different causes. The officers I saw who took the field with Machine Guns were quite well trained, at any rate from a technical point of view, but they had a much more difficult task than any we have heard described in the lecture this afternoon. We have heard from Major Abbey of the annihilating effect of unchecked and well directed machine gun fire; well, our officers had to bring their machine guns up under that sort of fire and over absolutely flat and open plain; there were no hills, valleys, hedges, enclosures, houses etc., as in France, affording opportunities for concealment and surprise. Our troops were in full view of the Turks throughout an advance, and as a rule, the enemy was quite invisible to them, and in my opinion our casualties chiefly occurred from the enemy's Machine Gun fire, often from ranges of 1000 yards and more, and nearly always from one or both flanks. (I agree with the lecturer that direct machine gun fire is not particularly deadly, but their crossfire is all that has been said of it.) It took some time before the extremely crushing effect of machine gun fire was realized in Mesopotamia and it was the attempt to bring up battalion machine guns through unsubdued hostile machine gun fire into the firing line that was the chief cause of the heavy casualties in my opinion.

Now there are in this theatre a good many officers who have advanced under the Turkish machine gun fire, and I think they will bear me out in saying that it is practically impossible to bring battalion machine guns up into the firing line under such fire within 600 yards of the enemy as has been suggested by the lecturer that $\frac{1}{3}$ of the machine guns should be so used.

Personally I am convinced from having seen it tried, that it cannot be done in flat open country without absolutely disabling losses. You can bring up machine guns into the position after it has been taken and can there "lock the front" and generally guard against counter attack and you can use machine guns to protect a flank but I do not see how you can support an infantry attack by machine gun fire: for machine guns in flat country cannot be fired over men's heads, and must be actually in the firing line to be used during an advance. No, any machine guns with battalions must in flat country be kept well back, or the detachments carrying the guns and ammunition will be knocked out. Of course our troops in Mesopotamia were at a disadvantage as compared with our troops in France in having old and cumbrous equipment, and at the time I speak of there were no Lewis guns in Mesopotamia. As regards training, the technical part of it among the original machine gun detachments was I should say good enough, but no doubt technical training in machine gunnery was inadequate. This was inevitable, as very little attention had been paid to it before the war, nor in the "Notes from the Front" which were compiled from experiences in France and with which we were supplied, was there much light thrown on the tactical problem which had to be solved in Mesopotamia, *viz.*, how to use machine guns on the offensive in flat open country when attacking an entrenched enemy well supplied with machine guns.

In those "Notes from the Front" it is, however, mentioned that in the early part of the present war in France before trench warfare became prevalent, the Germans used to move their machine guns with the 3rd line of each battalion in the attack and reckoned to get them in this way up to 400 yards of the enemy, but never succeeded in doing so when opposed to the British.

Our experience in Mesopotamia was practically the same and although battalion machine guns were on occasions brought up to the firing line, the losses were always disabling

Machine Guns in France.

and after the fighting in January all my battalion commanders had orders to keep their brigade machine guns well in rear and not to bring them up until suitable opportunities could be found for their approach and employment. The same remarks apply to the employment of brigade machine guns.

There was however I should say another important cause for the casualties among the machine gunners in Mesopotamia, namely the "waste of specialists", a point on which the lecturer has made some emphatic remarks. A large number of men in each battalion had been trained with Machine Guns, in addition to the ordinary detachments, but many of these trained men were not forthcoming when wanted for they had been kept in the ranks and had been killed or wounded in previous actions. Battalion Commanders naturally wish to have as many bayonets as possible, but it is a mistake to use your supernumerary specialists in this way.

These men are often the most intelligent and anxious to distinguish themselves, the men who lead the rushes and expose themselves most, and the first to fall.

To give an example. In one battalion there were at the beginning of last January 74 trained machine gunners; in less than three weeks there were only 14 left. It is impossible to keep up your specialists in the field with losses like those and orders were issued that no supernumerary specialists, e. g. machine gunners, grenadiers, signallers etc., were to go into action in the ranks but were to be kept behind as baggage guards etc., etc.,

This however leads to another evil. The Indian Field Service Establishments are so low that, after taking away all the specialists a battalion which has suffered heavy casualties becomes a mere handful of bayonets. For Mesopotamia all these special battalion and brigade units had in some cases to be improvised, and in all cases to be kept up out of the battalion strength, and were not supernumerary to the establishment. The remedy is of course to raise the Battalion Field Service Establishments to a much higher figure than at present.

THE TRAINING OF OFFICERS OF THE INDIAN ARMY RESERVE.

BY

MAJOR H. F. HARDMAN, SOMERSET LIGHT INFANTRY.

It has fallen to the lot of the British Regiments on the Indian Establishment who have not been selected to proceed on Active Service out of India to perform a great deal of indirect War Service, and to assist in the training of auxiliary troops of various stages of efficiency which has made a considerable call on the instructional ability of the Officers and Non-Commissioned Officers of these Battalions.

Of this work not the least interesting and valuable has been the preliminary training of the gentlemen who have been given commissions in the Indian Army Reserve of officers.

It is of course impossible for any officer who has been responsible for such training to record how this work has been done elsewhere than in his own station, and even there he can only describe the course pursued within his own immediate cognizance. Nevertheless it may be of interest to describe the process of training a batch of officers for the historian of the war as it affected India, and it may also be useful to those destined to train more of such officers. For though the war may be drawing to a close, or the material for officers getting scarce, at the time of writing neither of these eventualities appears immediately imminent.

The present writer has had the melancholy satisfaction of putting forth as his share of this war work the preliminary training of three such batches in the station where he serves, and the last was the 14th sent thence to their Indian Regiments.

The reason these officers are sent to a British Regiment before going to their Indian Regiment, it is presumed, is to conform in miniature to the practice usual in peace, that is of attaching officers selected for commissions in the Indian Army, after passing out of Sandhurst, to a British

unit for one year, so that the regimental system of the British Army may be imbibed in professional infancy, the theory being that Indian Regiments are modelled after the British pattern so far as circumstances admit.

The rudiments of instruction are more easily given in a British Regiment, where the Non-Commissioned Officers can take a share in the drill instruction and it is probably considered that deportment of a quasi-military, quasi-social character can be more easily obtained in the larger British Officers' Mess than in the smaller Mess of an Indian Regiment, and during his year there the young officer has an opportunity of learning something of the languages required.

With the officer of the Indian Army Reserve, at least the above reasons are very good ones for the course adopted, and though the period of training is very brief it is probably more stimulating in most respects than a separately formed school of instruction would be.

One only learns incidentally from the officers themselves how they came to be given commissions in the Indian Army Reserve. In many cases they appear to have applied for them and waited a considerable time before receiving any orders; in other cases they appear to be sent to a training centre without much delay. The officers come from the uttermost parts of the East Indies to the training place. They are of all stages of military efficiency and of various stages of social perfection and embrace a very wide range of professions and callings, but with very few exceptions they have all possessed and displayed the desirable quality of keenness.

One hears that some employers and firms have not been too patriotic in allowing their clerks and assistants to answer the call; on the other hand others have not only been patriotic but generous to their employees while serving, and the Government departments and railways have been conspicuously so.

The Staff of the Division, having been notified that a Course of Instruction will take place at a station in the

command, detail a Regiment to conduct the training and order the Commanding Officer to submit the name of the officer selected to carry it out. The officers of the Indian Army Reserve are then attached to this unit and are ordered to report themselves, on the date selected for the course to begin, to the Regiment, whose duty it then is to make arrangements for quartering them and attaching them to different messes.

It appears that the original idea was that the officers should mess with the Regiment to which they were attached for training, or at least with a British unit, but it has been found impossible to carry this out entirely in practice owing to the lack of accommodation, each class consisting as it does of about 25 officers.

The original period thought necessary for a Course of Instruction was five weeks, but this has been found insufficient to give the students even a glimpse at all the subjects they should be acquainted with before joining their Indian Regiment, and so the courses have been extended to six and in some cases seven weeks.

The Instructional Staff allotted to the officer selected to conduct the training has generally been two full rank Non-Commissioned Officers, exclusive of the services of a Non-Commissioned Officer of the Gymnastic Staff for physical training. If he is lucky the officer conducting the course will also manage to secure the services of a subaltern officer, on whose energy and ability he can rely, for however much he may be considered to be 'struck off duty' for the Course, every officer knows that it is impossible to shake off altogether the responsibility of commanding a Company, and in the case of a senior major the duties of P. R. I. and occasional Commanding Officer's work will inevitably crop up and take him from the Class during a parade—while in every good regiment it is an axiom that no parade should be in progress without an officer being present. The clerical duties moreover, of the officer conducting a course are also considerable, and though he can perform these to a great extent in his own time, yet the number of 'Urgents' and petty missives that will assail him during

working hours and take his attention from the Class, make the provision of a second officer very desirable.

He will naturally select one who will be up to date and proficient in subjects in which he may deem himself to be somewhat rusty and antiquated, such as Musketry and Bayonet Fighting, and if under the new order of things his Regiment has been given officers promoted from the ranks he would do well to select one of these.

He will also make his own choice, if possible, of the Non-Commissioned Officer Instructors and change them if they appear unsatisfactory for the work. He should at the outset explain to these Non-Commissioned Officers the nature of their duties, and the line of conduct he expects them to adopt towards the officers under training, insisting on proper respect at all times in addressing them, combined with firmness and patience on parade, and ordering them to report at once any trouble or difficulty they may have in managing their squads.

It is not advisable to keep the officers in permanent squads, more advantage being obtained by the change of Instructors' methods than by emulation between squads—unless it happens that there is so great a divergence in the progress of individuals joining, or through some joining late, that a first and second squad become necessary.

As much as possible of the preliminary clerical work of obtaining the particulars of previous service, age, height and all the other information required from the officers joining in order to compile the necessary returns, should be got through before the opening of the Course, together with the adjustment of claims for journey money, so that these calls on the time of the officers do not interfere with a fair start, and in the case of members of the Class arriving late, these details should be collated by the Orderly Room outside the hours of instruction. Another preliminary which should also be disposed of before starting the work is the provision of uniform for those who have arrived in plain clothes, by having the Regimental Master Tailor in attendance and getting measures taken. The uniform of those who have provided themselves with an outfit should

also be reviewed as it may be ill-fitting and of the wrong pattern. It is just as well to insist on uniformity from the outset as far as it can be reasonably attained, and as the garments required are few and inexpensive, it is no great hardship if every officer is required to provide himself with a coat and a pair of shorts, together with putties and hose tops as used by the Regiment.

The Class will then present a far more symmetrical aspect on parade than if each officer is allowed to turn out according to his own idea of dress.

A good pair of marching boots, a khaki helmet and shirt completes the outfit so far as exteriors are concerned. A fitting parade when the garments are ready follows in due course and in the meantime the officers turn out in such uniform as they have or in plain clothes. The horror of Tinker's mufti and civilian boots should be discouraged as strongly as possible.

To impress upon the officers the importance of uniformity and punctilioiusness about details, as well as to give them the power of detecting deficiencies and irregularities in the turn out of troops, it is a good plan after the first few days to call out an officer each day in his turn to inspect the squad with the Officer Instructor at the priucipal parade of the day, and subsequently to make the inspection of the section or platoon by its commauder a daily preliminary to telling off and proving his command.

The first desideratum in the conduct of a course of ius-truction is of course a syllabus or programme of what it is proposed to teach, and it does the officer, who conducted the first course in the station referred to, great credit that the syllabus [which he produced in a single evening at the request of the Staff] was so satisfactorily thought out and arranged that it has ever since served as the scale of parades and work to be attempted in the correct progressive order by each succeeding class. Only the hours of parade to suit other periods of the year have had to be altered and a few additions to the later stages of the course were found desirable, otherwise (so long as it is not too rigidly adhered to as to the hours for each particular subject)it forms an excellent guide for the officer

conducting the course. The syllabus referred to is here reproduced, and the subjects of the Indian Army lectures which were printed on the back of the syllabus are appended.

SYLLABUS OF INSTRUCTION IN INDIAN ARMY SUBJECTS.

1916.

Lecture No.	Subject.
1	Class Composition of the Indian Army.
2	Class Composition of the Indian Army, II.
3	Organisation and Mobilisation of an Indian Infantry Battalion.
4	Equipment & half-mounting of an Indian Infantry Battalion.
5	Administration of an Indian Infantry Battalion.
6	The Double Company.
7	Sanitation, I.
8	Sanitation, II.
9	Customs of the Service.
10	Preparing a Draft for the Front.
11	Organisation of an Indian Division.
12	The Quartermaster and Orderly Duties.
13	The Adjutant and Regimental Accounts.
14	Organisation of a typical Pioneer Battalion.
15	Organisation of a Silladar & non-Silladar Cavalry Regiment.
16	Administrative Services & Departments.
17	Rationing & Company Accounts.
18	Enlistment, Promotion, Pensions, Sheet Rolls.
19	Indian Military Law, I.
20	Indian Military Law, II
21	Recruiting Depots and Reservists.
22	British Officers' Mess management.

—Indian Army Reserve Officers.—

SYLLABUS.

MORNING.

AFTERNOON.

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<i>1st Week.</i>	<i>8-0 to 9-0 a.m.</i>	<i>9-0 to 10 a.m.</i>	<i>10-30 to 12-30 p.m.</i>	<i>2-0 to 3-0 p.m.</i>	<i>3-0 to 4-0 p.m.</i>
1st Day.	Physical Drill-Inf. Recruits' Table I. Physical Drill-Inf. Recruits' Table I.	Squad Drill I. T. Sec. 15-20. Squad Drill. Secs. 15-29,	Aiming and Firing Inst. M. R. Sect. 48. Aiming & Firing Inst. M. R. Sect. 48. Rifle Exercises I. T. 50-55.	Squad Drill Sec. 15-21 I. T. Lecture on Officers' Kit and dress; Officers' Messes. Lecture. Military Books, Lecture on the rifle.	Squad Drill Sec. 15-21 I. T. Lecture on Officers' Kit and dress; Officers' Messes. Lecture. Military Books, Lecture on the rifle.
2nd "	Squad Drill-Inf. Training, Sec. 30-38.	Aiming Instruction, Firing Instruction M. R. Sec. 49. Squad Drill-I. T. Secs. 15-38. do.	Rifle Exercises I. T. 50-55. Squad Drill. Secs. 15-38.	Rifle Exercises I. T. 50-55. Squad Drill. Secs. 15-38.	Rifle Exercises I. T. 50-55. Squad Drill.
4th "	Physical Drill. Table II.				
5th "	do.				
<i>2nd Week.</i>					
6th Day.	Physical Drill. Table III.	Squad Drill I. T., 15-38.	Rifle Exercises Secs. 50-59.	Rifle Exercises Secs. 50-59.	Firing instruction M. R. 48-50.
7th "	Rifle Exercises. I. T. 50-59.	Armourers Shop Lecture, Rifle. Section Drill I. T. 82-86.	Firing Instruction M. R. 48-51.	Lecture on Skeleton action.	Lecture on Guard Duties & paying compliments. Guard duties practical.
8th "	do—50-61.	do.	Aiming instruction.	Aiming instruction.	Lecture, Q. M's Department.
9th "	Physical Drill. Table IV.	Physical Drill. Rifle Exercises I. T. Secs. 50-68.	do.	Visual Training.	Lecture, official cor- respondence.
10th "					

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3rd Week					
11th	Day.	Extended order. I. T / Sec. 92.	Rifle Ex. I. T. Secs. 69-81	Lecture. Duties of N.C.O. in Barracks.	
12th	"	Signals and whistles I. T. Sec 92.	do.	Lecture. Duties of Regimental Staff.	
13th	"	Squad Drill I. T. Secs. 50-81	Platoon Drill.	Trigger pressing. Indication and recog- nition of targets. Landscape targets.	
14th	"	Physical Drill Table V.	Firing and aiming in- struction.	Visual Training and Judging distance, Fire direction.	
15th	"	Rifle Exercises I. T. Sec. 50-81.	Platoon Drill	Rifle Exercise 50-81.	
4th Week					
16th	Day	Rifle Ex. I. T. Sec. 50-81	Standard Tests.	Squad Drill I. T. 15-49.	Lecture on the parts of rifle stripped
17th	"	Section Drill I. T. 82-92	Kit Inspection, Bar- racks rooms, Pouch Ammu.	Junior Sub-target machine.	Lecture on arrest and Military Custody.
18th	"	Muscle Ex.	Platoon Drill.	Moving and vanishing targets.	
19th	"	Physical Training Table 6.	Standard Test Fire orders & Fire control	Standard Test Fire orders & Fire control	Lecture on Ranging & Range Cards.
20th	"	Fire direction and Company Drill.	Company Drill.	Range Practices.	10 rounds, 2 Practices do.

Lecture on Indian Army Subjects

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5th Week	
21st Day.	Entrenching.
22nd "	Entrenching, including loopholes.
23rd "	Company in attack.
24th "	Entrenching.
25th "	Company in defence and siting of trenches.

6th Week	
26th Day.	Night Outposts.
27th "	Lecture on theory of rifle and practice with mekometer,
28th "	Night work & reconnaissance for night march.
29th "	Fire direction practices.
30th "	Collective Field practices.

Note.— $\frac{1}{2}$ of the first hour set apart for Physical Drill and training each day during the first 4 weeks will be devoted to Bayonet Fighting.

No parades will be held on Thursdays other than communication drill. Lectures will be given on Thursdays on Indian Army subjects. Revolver shooting (voluntary) on Thursdays in 5th and 6th weeks. 4 Officers will be detailed as Supernumerary Orderly Officers. They will attend Orderly Room and Guard Mounting Parades etc., for instruction. During the course, these officers will be shown various military routine work as it occurs.

Every officer joining a class was given a copy of this syllabus, which thus formed a rough programme for him. The lectures on the Indian Army subjects have been found, as a rule, not to occupy so much time as was allotted to them, so more time is available for the other lectures and work of the course.

Physical Training has been a little more frequent especially when the season admits of its taking place before breakfast; the officers can then turn out in flannels and change into uniform for the after breakfast parade.

The most troublesome part of the opening week or fortnight of the training is the difficulty of coping with late arrivals, who have been unable to join on the date ordered, and to try and get the whole class started on their work simultaneously, but it would appear inevitable that some of the lectures should have to be repeated to, and some of the course missed by, individuals arriving late.

Some of the lectures at the beginning of the course are of first rate importance, or should be so, being of an introductory character. Although these are shown in the Syllabus under such headings as "Officers' kit and dress" or "Officers' Messes" they should in fact have a wider scope and touch on the position of the officer in the service, and the responsibility that position entails. The moral foundation should be laid for the soldierly spirit, upon which the Instructor should insist all through the course, making for the highest ideals, in the earliest stages of the professional training. The conduct and character expected of an officer and a gentleman should be particularly dwelt upon, and the sacredness of his word of honour as such. Every officer of the class should attend these lectures though some individuals may have to miss drill or gymnastic training to do so. Many of the officers, being young, it is only fitting that they should get the right perspective of the obligations which they have undertaken and even with older men, the new departure in life is a very suitable occasion for looking at one's duty from a new point of view. The

Instructor could not do better than base his remarks on an excellent lecture on this subject given at one of the tactical schools, formed for the New Army in France, which was reproduced in the "Times Weekly Edition" of the 21st April 1916, and is now sold by the "Times" in pamphlet form—it is entitled "The duties of an Officer".

For the first fortnight the work consists of drill in progressive stages, the handling of arms and elementary musketry instruction, combined with daily and progressive Physical Training. It is important to insist on the latter not being of too strenuous a nature at the start, or sprained ankles and swollen knees will be found to incapacitate individuals of the class for days on end and considerably delay the training. Another matter which will delay progress, unless the dates are arranged by the Instructor, is the inoculation of the officers against enteric fever, sometimes insisted upon by the medical authorities. It is best to have them all done together on a Wednesday or Saturday and arrange the work of the Class to suit their condition on the next working day.

Punctuality must be insisted upon from the start and the probability is that subsequently no trouble in this respect will arise, on the other hand the Instructor has to go carefully into the details of time and place for each individual in a station where the officers may be quartered at some distance from the place of parade and perhaps some in another part of cantonments from the regiment which is training them, so as to arrange the hours for parade and the time allowed for meals so that all can be punctual without undue inconvenience or haste. Motor bicycles form a very useful adjunct to time-saving devices when the officers have them. Short breaks between parades always repay the time given for them in renewed zest and fewer interruptions during parade hours for necessary absences, while the attachment to the class of a permanent orderly, detailed from the unit to go messages, get out aiming targets, and mount guard over the arms during meals and breaks has been found a very satisfactory institution.

In stations where it is inadvisable or prohibited for the officers to retain their rifles in their own quarters, it is necessary for the officers to draw them daily as required from the company storeroom, from which they are borrowed, in accordance with arrangements made at the beginning of the Course, and the time taken to draw them and return them before and after parades has to be taken into consideration in legislating for punctuality.

It has been found by experience that one of the most difficult and yet very essential attainments for officers to acquire in the short time at disposal is a good word of command and sufficient confidence to give commands in a loud voice. To exercise each officer individually and correct his errors with a limited staff in so short a time was practically impossible in addition to the other instruction. The correct way of giving a word of command, on the correct foot, with a proper cadence, and with the correct break between the cautionary and executive words, in a robust voice without diffidence, is no mean accomplishment for a beginner who has never perhaps been in contact with military life before; and yet without it he can be of little use as an officer. To expedite the attainment the following experiment was tried with the most recent class of Indian Army Reserve Officers and with very satisfactory results:—

From the beginning of the drill instruction for a portion of the time allotted to it each day officers were instructed not to act upon the word of command of the Instructor at once, but to imitate exactly that word of command and then act on the last word of his own command so given, the whole squad shouting the word of command altogether and so getting the correct intonation, cadence and the confidence, bred of collective effort, to shout loudly. No other batch of officers trained by the present writer went away to their regiments with such good individual words of command, or with so much confidence in their delivery of orders. This system also seemed to improve the rapidity with which the drill was learnt.

It was for a long time thought obligatory to instruct the officers going to join the Indian Army in the drill which was till quite recently still used in India, that is, as enunciated in the Infantry Training of 1911, but the impossibility of obtaining copies of this volume and the futility of trying to instruct officers without their being in possession of books together with the knowledge that at the front the four company system is adopted by all infantry, whether British or Indian, decided the authorities in the latest courses to allow the 1914 Drill Book to be followed.

There is always a difficulty in India during the training season where the guard duties are still far heavier than they are at home, and where the number of employed men is very large, to find any men to place at the disposal of an officer conducting an extra-regimental course of instruction. This has nearly always been the case in training Indian Army Reserve Officers, but so long as a few weak platoons can be occasionally collected, and this may be done by applying for one of the companies struck off for training or for a Commanding Officer's parade, the rest of the drill can be satisfactorily conducted for instructional purposes by using ropes, held by the officers themselves. If these ropes for rope drill are not in possession of the battalion they can be extemporized with log lines—the ropes used for trying up kits of which every man in a battalion has one in his charge.

The best system for bringing out the capacity for drill and exercising the ingenuity of the officers learning to manoeuvre a section, platoon or company, is to place a marker at another part of the parade ground and direct the officer commanding the unit for the time being to move his command on to the marker in the same or another formation, employing the fewest words of command in effecting the move or moving it in the quickest way. If an officer can do this successfully two or three times, another officer can be called out to take command. If the officer fails he must be prompted and shown what his mistakes are by the instructor until he can execute the evolution.

A certain amount of steady drill should be carried on throughout the course, but after the first fortnight or at the most three weeks it should be unnecessary to stick to the barrack square so assiduously, for it then becomes necessary to apply the drill there acquired to manoeuvring men in the field so as to meet and defeat an enemy. But before leaving the parade ground a certain amount of ceremonial drill such as sizing a company, and the details of guard mounting, guard duties, compliments and sentry-go should be mastered by the class. A visit should be paid to the guard mounting parade of the regiment, and to the guard room of the regimental quarter guard about this time, so that the officers may see the practical working of what has been explained to them on the square and in the lecture room.

Drawing, returning, and saluting with, the sword may be explained and practiced about this period or later on.

On getting away from the parade ground after a short practical explanation of extended order drill and the use of the whistle and field signals as laid down in the Infantry Training, the squads may be taught to work by signal under their own officers. While explaining the bugle field calls and those used on manoeuvres is a good opportunity, when a bugler is present, to run through the barrack calls and explain their use and recite the *memoria technica* for recalling their meaning.

One has constantly to remember in training the class that officers have not the same opportunity as soldier recruits for picking up military knowledge of this kind, and it all goes to the making of a soldier.

The use of ground may be taught by a series of demonstrations suitable for first, the instruction of the individual scout; later, for patrols and bodies of skirmishers; and eventually for the commanders of troops in attack or in defending localities.

The first of these demonstrations illustrates how small an excrescence or subsidence of the earth's surface suffices for the purpose of concealing a man if he remains still. It may be carried out as it used to be done at Hythe, to explain

what is meant by cover from view.

The Instructor whilst lecturing on the use of ground orders the squad to turn about and directs their attention to some distant feature on the new horizon. The Assistant Instructor (in collusion) then orders them to turn about again, meanwhile the lecturer has disappeared from view by screening himself behind some bit of natural cover, previously selected for the purpose and near the spot where he stood. If this is well done a very natural surprise will result, and the squad, having looked in vain for their instructor, can be shown him in concealment quite near them by some movement on his part; thus the lesson as to the value of cover however slight, and of immobility when wishing to be undetected, is quickly learned.

After an explanation of the value of background as an aid to concealment and of the neutral tint of uniforms and again of keeping still, the class may be divided into two parties to explain these points more clearly by demonstration at a greater distance and with more men. One party observes the other; who merely carry out the directions of the Instructor, who signals by a prearranged code to his Assistant (remaining with this party) what he wishes done. The Instructor will turn the observing party about when he wishes any change carried out. Thus, he will move the observers away to a distance of 200 or 300 yards and order the other party to present themselves in some of the following aspects:—

Standing in close order, in column of fours, in groups of four or five men, in extended order, in the open or under the shadow of trees or buildings, on a skyline or in a hollow.

He will then require them to kneel in similar formations and eventually to lie down in extended order taking cover. Meanwhile he points out the difference in visibility of each formation and invites discussion. He can move his party nearer to the other one or take them on to ground giving more command of view, he will direct the party

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observing to aim at the various targets presented and finally, when the other party are effectually concealed, to move towards them by gradual stages until every individual of the other party has been discovered, noting and discussing the value of the cover they severally took, and how movement and unsuitable background gave away their positions. The other party, will of course be similarly exercised. This instruction may be combined with judging distance if, as should have been the case, instruction in visual training as laid down in Chapter V. Musketry Regulations Part I, has already been given.

Other demonstrations of a similar kind can be given if time and ground for the purpose are available, for instance, one party moving along a nullah endeavour to approach another in a supposed defensive position without discovering themselves.

As regards the musketry instruction the first point to aim at is to make each officer a good individual shot and the process of training is not other than that adopted for the private soldier. There is generally a good deal of keenness and emulation among a class of officers, which is further stimulated by sweepstakes on the various practices or on the whole course. It has as a rule only been possible to fire a modified course and the practices selected for individual range practice have been as follows:—

1	Practice	18	of	Part	111	Table	B.
2	„	2	of	„	1	„	B.
3	„	20	of	„	111	„	B.
4	„	16	of	„	11	„	B.
5	„	19	of	„	111	„	B.
6	„	21	of	„	111	„	B. (as amended)
7	„	22	of	„	111	„	B.
8	„	23	of	„	111	,	B.

Rapidity of fire, as might be expected, does not in the majority of cases compare favourably with well trained regular troops, but with plenty of previous practice at rapid loading and aiming and a good supply of dummy cartridges a fair stage of proficiency in the average may be reached.

Individual field practices have as rule been arranged in the form of competitions, one of which has been to ascertain the best fighting shot in the class. A good method is to draw the competitors in heats so that any byes come in the earlier rounds, as is done in lawn tennis and golf competitions. About four firers can compete at once with a view to supervision and safety. The best targets are falling plates and a couple of advances with two or three firing stages at unknown ranges thoroughly test the competitors in rapidity of movement, rapidity of fire, in judging distance and coolness under exciting conditions, time limits being fixed from the beginning of an advance at each stage. Fifteen rounds, with three firing points at three lots of two targets to each firer, makes a good practice, the firers being allowed to fire at any of the six plates from each firing point, using five rounds at each firing point, or as many as he can get off in the time.

Officers who have missed the individual range practices should not be allowed to fire field practices. There is always sufficient ammunition to exercise the officers thoroughly in field practices as the authorities allow them to be all treated as recruits so far as ammunition is concerned.

Collective field practices present rather a greater difficulty, as the object should be to test each officer in the delivery of fire orders under circumstances approximating to service conditions, after he has been trained at musketry drills and manœuvres, with blank ammunition, to act as a fire unit commander. Before proceeding to collective practices it is useful to give a demonstration to show the comparative value of individual and collective fire under proper control. To do this, the individual practice can consist of pairs of firers advancing by stages towards a row of falling plates, in each case, one of the pair firing and the other observing the effect alternately at each stage of the advance, until the whole class has been so exercised, and the hits, per rounds fired, registered. The Instructor then takes command of the whole of the officers formed into a section,

or two sections commanded by the Non-Commissioned Officer Instructors, and having arranged for an equal number of plates to be placed in groups and halting to order fire from approximately the same firing points, after advancing in similar stages, he is able to demonstrate the superiority of collective fire, in either case the range is of course unknown; incidentally he gives an example of how to deliver fire orders and the effect of concentration or distribution of fire. A good and realistic collective practice to exercise the officers in delivering fire orders rapidly is a defensive one, arranged with surprise targets which appear for a short period only, and from different parts of a glacis thus representing infantry in the later stages of an attack.

Each officer should take command of the section in turn. The section fires from a defensive position or fire trench. The targets appear from pits, a line of standing figures on two poles held up by fatigue men under the directions of a responsible Non-Commissioned Officer with a watch. The targets appear from three or four pits in succession and there are four or five exposures in each series, that is, one of the targets is exposed twice. The first exposure is for 15 seconds, the second for 10 seconds, the third for 5 seconds and the last for ten seconds, or as determined by the amount of ammunition to be expended, or as experience shows to be suitable; or the nearer targets can be exposed for a short period and the further targets for a longer period each time their turn for exposure comes round. A period of 5 seconds or 10 seconds should elapse between each exposure, which can be taken by the Non-Commissioned Officer in charge of each pit from the last shot fired at the previous pit exposing.

By an arrangement of permutation the targets never appear twice in the same order. Each trench being lettered, the Non-Commissioned Officer is secretly given a table, as to the order in which he is to raise the targets in his particular pit. These tables are identical in each pit. Thus with three pits:—

"A" may be 350 yards, "B" 300 yards and "C" 250 yards, or as arranged by existing pits.

The Table can then be arranged as follows:—

Series. Exposed. Down. Expos-Down. Exposed. Down. Exposed.
15 secs. 5 sec. 10 sec. 5 sec. 5 sec. 10 sec. 5 sec.

1.	A.	B.	C.	A.	B.	C.
2.	B.	C.	A.	B.	C.	
3.	C.	A.	B.	C.		
4.	A.	A.	B.			

and so on.

A check is made after each series by bugle call, and the hits sent down and the targets patched. Each officer is allowed the same number of rounds for each series and the firers can start with five rounds in the magazine, and afterwards load with one charger whenever the 'Cease Fire' is ordered. The targets will probably have to be improvised unless enough fatigue men are available for each figure target to be held on a pole by one man, when the target described on Plate 37 Part 11 Musketry Regulations can be used. The pits may generally be found suitably placed on most field firing ranges. A periscope in each pit might assist the Non-Commissioned Officer in charge to raise his targets at the correct time and in proper sequence as detailed in the table. A short rehearsal of the target parties before the arrival of the firing party is advisable. This practice also forms a very good exercise in fire discipline and observation, and as training for trench warfare; it can also be used as a competition in delivery of fire orders by comparison of results, but in this case the length of exposure from the several pits should be constant, *i.e.* in the foregoing example "A" would always expose for 10 seconds and "B" and "C" always for 5 seconds each, in order that results might be comparable.

To revert to the syllabus; before the range practices are begun the instructor should try and arrange that every officer has been on duty as a supernumerary orderly officer in charge of a subaltern of the regiment, and he should

therefore take an early opportunity of giving the class a lecture on the duties of an orderly officer before they do this. As it is considered that four officers can perform this duty at a time, about a week suffices to give the whole class the necessary instruction, but it is wise to put them on duty with subalterns who are likely to instruct them fully in the proper performance of it and not with those who are themselves novices.

In the third or fourth week a lecture should be given on night work and subsequently the exercises in preliminary night operations, mentioned at section 113 Infantry Training 1914, should be carried out in the dark.

A night march by compass bearings may also be carried out as an instructional exercise on another date if the time of year lends itself to night work.

With regard to bayonet fighting the instruction, except that for loose play, is best carried out apart from physical drill and not as suggested in the foot note on the syllabus, as in these days it is necessary to teach the officers to attack a series of trenches containing dummy figures, and the class should be fully equipped and receive instruction in thrusting with and withdrawing the bayonet, in accordance with the most recent orders on the subject. Indeed in every department of instruction the officer conducting the course will avail himself of all the latest ideas gathered from experiences in the present war, and in lecturing on books he must not forget to include "Notes from the Front".

It is important that officers should be taught the method of drawing tools and marching with them in silence, 'slinging arms' being a prelude to this exercise. The more it is carried out as a drill, the easier it is to inculcate the importance of order and quietness and the value of previous preparation for any night work. The officers should be taught how to extend for work, how to handle their tools, with a view to the safety of working parties, and how to site trenches. They should also be taught so much about digging as to allow them to appreciate what results may be expected from men

unaccustomed to such work; but time does not admit of their carrying out a scheme of trench digging. It is preferable to take the class to view approved constructed trenches where explanations can be given on the spot in continuation of previous lectures on trench construction and trench warfare.

With regard to lectures, in addition to those mentioned in the syllabus, others should be given to assist the officers in the study of their books. They should be based on chapters in 'Field Service Regulations Part 1,' and 'Infantry Training' e.g. "Intercommunication and Orders", "Marching", [which should be followed if possible by a practical illustration either with the battalion, a company, or even alone] "Quarters", "Protection", "Information", and "Mountain Warfare". These again should be illustrated and carefully explained on the ground, where the locality is suitable for the purpose. From 'Infantry Training' should be taken "Infantry in Battle", "Infantry in Attack", "Infantry in Detence", "Outposts" and "Ammunition Supply" each being delivered previous to any practical work on the theme discussed. Other instruction in kindred subjects must be given incidentally during hours of parade. A lecture should be given on military engineering terms based on the first and following pages of "The Manual of Field Engineering"; "Bridging" and "Obstacles and Revetments" will probably require two more lectures, the blackboard and chalk being freely used by the Instructor.

It has not been found possible to include map reading and field sketching in the course otherwise than to indicate where the officers will find the subject explained and to impress upon them its importance.

In the delivery of all lectures, the Instructor must remember that even an indifferent lecture in his own words is far more instructive than any amount of reading aloud from the text books. The lectures must therefore be prepared, and only sufficient notes used to keep the lecturer from straying from his subject, otherwise using his own language and keeping his eyes on the audience; a little practice at this easily brings a fair amount of proficiency. The

Instructor should after each lecture invite questions from the officers and sometimes discussion.

The course should conclude with a written examination, which should as far as possible embrace every topic on which instruction has been given, and at the same time endeavour to bring out the talent of the military student and his power of expression and whether he has read his books and thought about the subjects treated of. The questions for the examination paper can be jotted down by the Instructor from time to time during work and then arranged under headings and typed in sufficient numbers for the class, two or three questions being sufficient on each subject. Thus for example:—

USE OF GROUND.

1. What do you understand by cover?
2. When should troops in battle reorganize?
3. What is the principal difference between company training and real war?

OUTPOSTS.

1. What are the duties of a sentry by day in the line of observation?
2. Why and how are night arrangements different from day duties?
3. Why do outposts fight?

The examination should be held two or three days before the end of the course, and a correction of the work done should be made the occasion for further instruction as well as of correcting erroneous ideas. The serious difficulty of looking over the papers, correcting them with notes and allotting marks so as to gain a comparative view of the individual progress, a task, which if undertaken by the instructor after the course, means at least a fortnight's work, and allows the officer to go away in ignorance as to the result, was successfully solved at the last course in the following manner:—

The instructor took the questions *seriatim* and answered them himself *viva voce* with full explanation of the subject

introduced by each question. He then said what the maximum marks for the question in point were, and the candidates having each being given the answers of another candidate, after some discussion and questions to the Instructor, allotted the marks they deemed fair and the next question was proceeded with, so that the whole examination paper of some 32 questions by some 25 candidates was corrected and the marks allotted in about three hours, and to the general satisfaction of all concerned. The correctors of papers were changed about every hour to prevent prejudice from creeping in. In the result the percentage of mark ranged between 96 and 27 of the maximum.

In reference to the examination it is worth remarking that judging from some of the specimens of spelling and caligraphy it seems remarkable that the authorities should put applicants for commissions, through no educational test before accepting them. The examination at the end of the course assists the instructor very considerably in compiling his final report on the progress made by each officer. It should here be explained that throughout the course the officer conducting it, besides making a general report on the progress made each week, is required to record periodically his opinion, on a special report form, of the progress of each individual. This weekly reporting is a most valuable exercise for the instructor, as it ensures his getting to know each officer individually as soon as possible with his merits and defects. Not only is every officer known to the instructor very thoroughly after a few weeks of the training, and before applications for particular regiments are submitted, but the Commanding Officer and the Brigade Commander pay frequent visits to the parade ground, and make periodical inspections of the officers under training, and go into the case of those who are not making good progress, but also the General Officer Commanding the Division, besides seeing officers on parade, has an interview with each officer before reporting on him. This at least has been the practice in the station where these experiences have been gathered. So that

an officer of the Indian Army Reserve is well tested as to his fitness to remain in the service before he goes to join his regiment.

If this procedure is adopted in other Divisions it would seem preferable if the gentlemen to whom commissions are offered could be considered as on probation only up to the date when they are sent as officers to join their regiments. In the happily few cases where it has been difficult to recommend individuals as fit for the position of an officer such arrangement would have saved a good deal of formality and unpleasantness in securing that their services were dispensed with, and it would have been possible to compensate them for lost time by allowing them to return to civil life without any stigma attaching to their repute. In one or two other cases also regiments would have been saved from obtaining a useless encumbrance when they expected an officer.

The foregoing notes, together with a careful study of the syllabus, it is hoped, may be found of service to any officer who perhaps for the first time is confronted with the ordeal of conducting a course of instruction, and also prove of some interest to others who wonder how the not inconsiderable number of very passable and tolerably efficient officers of the Indian Army Reserve have been moulded (practically from the raw material) into what they now are, namely able to do their bit, and of great assistance to the Indian Army in this time of stress.

“ NAMDARH.”

NOTES ON THE TRAINING AND ORGANISATION OF REGIMENTAL SIGNALLERS.

By

CAPTAIN N. L. MITCHELL-CARRUTHERS, 30TH PUNJABIS.

(These notes are the results of some experience gained on field service.)

On service it is most important for every Regiment to have a Regimental Signalling Officer detailed for communication duties only. He should not be expected to carry out other regimental work as well. In order to ensure uninterrupted internal communication in the regiment as well as between regimental and brigade headquarters, he must organise a proper system of intercommunication by means of telephone lines, visual signalling and orderlies.

It is a great advantage if the signallers of a regiment live together both in barracks and camp (as the Machine Gun detachment does). It develops *esprit de corps* amongst the signallers; they get to know each other and will work together better in the field.

It was found that thirty signallers in a battalion were not too many for efficient intercommunication; and, on some occasions more could have been usefully employed. Four orderlies should be permanently attached to the signallers; these men should not be changed.

The above could then be distributed as follows:—

- | | | | |
|-------------------------------|--|---|--------|
| A. 2 Signallers per company | Would always remain
or double company. | with their company. | 8 |
| B. 3 telephone detachments | Would remain at first
of 4 men each. | with regimental
headquarters until
required to run out
cable | ... 12 |
| C. 10 headquarter signallers. | Would remain with re-
gimental headquart- | | |

ers	... 10
	<hr/>
Total Signallers ...	30
Sergeant or havildar ...	1
Orderlies ...	4

"A" would keep up visual communication between their company and regimental headquarters; and would assist the telephone detachment if a cable were laid out to their company.

"B" would be used by the regimental signalling officer as required. The men of these detachments should not carry more than 50 rounds of ammunition.

"C" would be used to keep up visual communication with the companies and with neighbouring units. The Regimental signalling officer must remember to keep a complete visual terminal ready to open visual communication with brigade headquarters to supplement the telephone line laid out by the brigade signalling officer.

The orderlies would be used to carry messages short distances or when the other means of communication fail.

The object to be kept in view is the training of the signallers to the highest state of efficiency in all duties required of them in the field.

Therefore, after the men have acquired proficiency in reading and sending on all instruments and have a good knowledge of the duties of station work and of the method of dealing with messages, the training should consist solely of practical work in the field. The more field work the men do in peace time over different sorts of terrain, the more use they will be on field service.

In this training in the field particular attention should

1. Good and rapid cable laying, particularly cable laying at night. Sending and receiving messages on the buzzer at 12 words a minute Re-orga-

nisation of cable lines when the Officer Commanding moves his headquarters.

2. Visual communication on the move. Sending and receiving verbal messages; in this case the signaller should invariably send the address "to" and "from."
3. Long distance flag reading without a telescope.
4. Picking up signal stations from a given bearing and distance, or when only the general direction is given.
5. Long distance station work with helio and lamp.
6. Rapid helio setting on indistinct and distant objects.
7. All station work must be speeded up. Delay occurs more in filling up the form and delivering the message than in the actual transmission. It must be constantly impressed on all signallers that their work is of the greatest importance, and that a delayed message in the field is often useless.

All regimental signalling equipment should be overhauled in the field whenever opportunity offers.

Equipment.

Telephones should be cleaned and batteries tested. The great enemy of the telephone is damp. It spoils the telephone and runs down the batteries. Telephones should be dried as soon as possible after getting wet. The batteries, also, need careful watching. Even when well corked down they sometimes 'creep' and the acid eats away the internal connections in the telephone.

The cable should be inspected, all joints made 'pukka' and bare places insulated. Drums loosely wound should be re-wound, otherwise delay will occur in reeling out. Deficiencies and unserviceable equipment should be made up from the nearest signal park. The regimental signalling officer should keep a careful watch on the expendable stores; he should never run out of any stores. At all inspections of equipment he should see that both the outer and inner

ends of the cable on each drum are ready prepared. This is best done by tying a 'figure of eight' knot at the end of the cable, then stripping the insulation off the cable from a point one inch from the knot for about two inches. Earth pins should also be kept ready with leads attached to them; leads may be soldered on to the earth pin, with the end prepared as above, or with a U-shaped brass terminal soldered on to the end of the lead so as to fit round the earth terminal of the telephone. Tapping-in leads will also be very useful and will save having to bare the cable. They can be made up regimentally by soldering a six-inch length of cable on to an ordinary safety pin; in this way they are easily carried.

The following additional equipment seems essential to a regiment for efficient communication :—

1. Two helios.
2. Two lamps.

Many regiments have supplied the above deficiencies for themselves.

3. Three cable drums.
4. Three drum carriers.

These are required for reeling up purposes, at present the cable detachments have to reel up the cable from front to rear; their services are thereby lost until this is completed, whereas if each detachment was supplied with an additional drum (empty) and carrier one man could reel up the old cable line from the rear while the detachment is laying out a new cable line.

5. One voltmetre.

At present regiments have no means of testing the batteries of their telephones.

6. Spare parts for telephones.

These would enable the regimental signalling officer to carry out repairs on their telephones, instead of sending them back to the instrument repairer and losing their use for some weeks.

The following are a few notes dealing with the employment of signallers in the field to which particular attention should be paid:—

1. Receipts must be obtained for messages delivered. Signallers should get the duplicate message signed by the addressee.
2. Regimental Signalling officers should insist on messages, for transmission by Indian signallers, being written distinctly. A great deal of time will be thus saved in the transmission of the message.
3. If an officer insists on sending a verbal message, the signaller must invariably send the address "to" and "from". On the move short verbal messages are often unavoidable; e.g. orders of advanced, flank guards etc.,
4. Signallers should at all times be acquainted with the position of the companies of their unit, and of their regimental and brigade headquarters.
5. Visual communication should be opened between regimental and brigade headquarters on every possible occasion, even though the latter may not always be able to answer.
6. The importance of good cable laying must be constantly impressed on all signallers. The cable must lie flat and loose on the ground. Over open ground it must be pegged down or tied to bushes every twenty or thirty yards. Tightly laid cable is certain to be broken.
7. Telephone communication should always be supplemented by visual signalling when possible.
8. Signallers do not generally realise the importance of having a good earth connection. Earth pins must be clean and free from rust. They must be driven as deep as possible into the ground. If the ground is very dry water must be continually poured over them. To get a good earth it may sometimes be worth laying a considerable length

Training Signallers.

- of cable to get the earth pin in the bed of a stream or some low lying, damp, ground.
9. Bad results in telephone communication can generally be traced to a bad earth, a loose or dirty contact, or leakage through the insulation of a part of the cable being worn away and the bare cable touching the ground. Indian signallers, in particular, are inclined to overlook these small but most important points.
 10. Signallers should never be allowed to use the telephone for speaking (except to test the speaking circuit). All work should be done on the Buzzer.
 11. On many occasions there will be more than two telephone offices on the line. Strict orders must be issued that a message in progress is not to be stopped by a third office unless the circumstances are very exceptional.
 12. At the base office there should be about fifty yards of spare cable in case the office has to be moved a short distance. Remember that the telephone must go to the Officer Commanding and not the Officer Commanding to the telephone. There must always be a lineman, with a telephone, if available, ready to move out from the base office to repair a break in the cable.
If possible an empty drum and spare carrier should be left so that reeling up can be started from the base.
-

WHAT IS A YEAR'S TRAINING ?

BY

MAJOR R. W. W. GRIMSHAW, POONA HORSE.

What do we really mean by a month's or a year's training?

The use of these terms when applied to periods available for training soldiers, especially Indian ones, has always appeared to me a mistake unless their true values are appreciated.

I propose therefore reducing to days all that is summed up in the expression "a year's training" and for the sake of brevity and clearness treat the analysis as a single entry account.

EXPENDITURE.	RECEIPT.
Items. .	The year. 365.
1. Sundays	52
2. Thursdays	52
3. The Saturday half holiday ...	26
4. Xmas week from Dec. 24th to January 1st (inclusive) ...	9
5. Easter	4
6. Ten days' leave which includes 1 Thurs. 1 Sun. & $\frac{1}{2}$ Saturday ...	7
7. Regimental holidays to commemo- rate special days or to hold sports	4
8. Incidental leave such as sick leave ...	7
9. Days when owing to climatic con- ditions no work can be done. ...	7
10. Fifteen Govt. gazetted holidays from which must be deducted one third to allow for these days coinciding with above items ...	10
11. Days available for training ...	187
Total ...	365 365.

One hundred and eighty seven days! But worse is to follow. Fifteen per cent of the men are permitted to take seven and a half month's furlough per annum. Many Regiments break

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The course should conclude with a written examination, which should as far as possible embrace every topic on which instruction has been given, and at the same time endeavour to bring out the talent of the military student and his power of expression and whether he has read his books and thought about the subjects treated of. The questions for the examination paper can be jotted down by the Instructor from time to time during work and then arranged under headings and typed in sufficient numbers for the class, two or three questions being sufficient on each subject. Thus for example :—

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The examination should be held two or three days before the end of the course, and a correction of the work done should be made the occasion for further instruction as well as of correcting erroneous ideas. The serious difficulty of looking over the papers, correcting them with notes and allotting marks so as to give a comparative view of the individual progress, a task which it undertaken by the instructor after the course, means at least a fortnight's work, and allows the officer to go away in ignorance as to the result, was successfully solved at the last course in the following manner :—

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introduced by each question. He then said what the maximum marks for the question in point were, and the candidates having each being given the answers of another candidate, after some discussion and questions to the Instructor, allotted the marks they deemed fair and the next question was proceeded with, so that the whole examination paper of some 32 questions by some 25 candidates was corrected and the marks allotted in about three hours, and to the general satisfaction of all concerned. The correctors of papers were changed about every hour to prevent prejudice from creeping in. In the result the percentage of mark ranged between 96 and 27 of the maximum.

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The object to be kept in view is the training of the signallers to the highest state of efficiency in all duties required of them in the field.

Therefore, after the men have acquired proficiency in reading and sending on all instruments and have a good knowledge of the duties of station work and of the method of dealing with messages, the training should consist ~~mainly~~ of practical work in the field. The more field work the men do in peace time over different sorts of terrain, the more use they will be on field service.

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tested. The great enemy of the telephone is damp. It spoils the telephone and runs down the batteries. Telephones should be dried as soon as possible after getting wet. The batteries, also, need careful watching. Even when well corked down they sometimes 'creep' and the acid eats away the internal connections in the telephone.

The cable should be inspected, all joints made 'pukka' and bare places insulated. Drums loosely wound should be re-wound, otherwise delay will occur in reeling out. Deficiencies and unserviceable equipment should be made up from the nearest signal park. The regimental signalling officer should keep a careful watch on the expendable stores; he should never run out of any stores. At all inspections of equipment he should see that both the outer and inner

ends of the cable on each drum are ready prepared. This is best done by tying a 'figure of eight' knot at the end of the cable, then stripping the insulation off the cable from a point one inch from the knot for about two inches. Earth pins should also be kept ready with leads attached to them; leads may be soldered on to the earth pin, with the end prepared as above, or with a U-shaped brass terminal soldered on to the end of the lead so as to fit round the earth terminal of the telephone. Tapping-in leads will also be very useful and will save having to bare the cable. They can be made up regimentally by soldering a six-inch length of cable on to an ordinary safety pin; in this way they are easily carried.

The following additional equipment seems essential to a regiment for efficient communication :—

1. Two helios.
2. Two lamps.

Many regiments have supplied the above deficiencies for themselves.

3. Three cable drums.
4. Three drum carriers.

These are required for reeling up purposes, at present the cable detachments have to reel up the cable from front to rear; their services are thereby lost until this is completed, whereas if each detachment was supplied with an additional drum (empty) an officer or one man could reel up the old cable line from the rear while the detachment is laying out a new cable line.

5. One voltmeter.

At present regiments have no means of testing the batteries of their telephones.

6. Spare parts for cables.

This would enable the regimental signallers to carry out repairs on their telephone wires, instead of sending them back to the workshop, repairing and losing their use for several weeks.

The following are a few notes dealing with the employment of signallers in the field to which particular attention should be paid:—

1. Receipts must be obtained for messages delivered. Signallers should get the duplicate message signed by the addressee.
2. Regimental Signalling officers should insist on messages, for transmission by Indian signallers, being written distinctly. A great deal of time will be thus saved in the transmission of the message.
3. If an officer insists on sending a verbal message, the signaller must invariably send the address "to" and "from". On the move short verbal messages are often unavoidable; e.g. orders of advanced, flank guards etc.,
4. Signallers should at all times be acquainted with the position of the companies of their unit, and of their regimental and brigade headquarters.
5. Visual communication should be opened between regimental and brigade headquarters on every possible occasion, even though the latter may not always be able to answer.
6. The importance of good cable laying must be constantly impressed on all signallers. The cable must lie flat and loose on the ground. Over open ground it must be pegged down or tied to bushes every twenty or thirty yards. Tightly laid cable is certain to be broken.
7. Telephone communication should always be supplemented by visual signalling when possible.
8. Signallers do not generally realise the importance of having a good earth connection. Earth pins must be clean and free from rust. They must be driven as deep as possible into the ground. If the ground is very dry water must be continually poured over them. To get a good earth it may sometimes be worth laying a considerable length

Training Signallers.

of cable to get the earth pin in the bed of a stream or some low lying, damp, ground.

9. Bad results in telephone communication can generally be traced to a bad earth, a loose or dirty contact, or leakage through the insulation of a part of the cable being worn away and the bare cable touching the ground. Indian signallers, in particular, are inclined to overlook these small but most important points.
 10. Signallers should never be allowed to use the telephone for speaking (except to test the speaking circuit). All work should be done on the Buzzer.
 11. On many occasions there will be more than two telephone offices on the line. Strict orders must be issued that a message in progress is not to be stopped by a third office unless the circumstances are very exceptional.
 12. At the base office there should be about fifty yards of spare cable in case the office has to be moved a short distance. Remember that the telephone must go to the Officer Commanding and not the Officer Commanding to the telephone. There must always be a lineman, with a telephone, if available, ready to move out from the base office to repair a break in the cable. If possible an empty drum and spare carrier should be left so that reeling up can be started from the base.
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WHAT IS A YEAR'S TRAINING ?

BY

MAJOR R. W. W. GRIMSHAW, POONA HORSE.

What do we really mean by a month's or a year's training?

The use of these terms when applied to periods available for training soldiers, especially Indian ones, has always appeared to me a mistake unless their true values are appreciated.

I propose therefore reducing to days all that is summed up in the expression "a year's training" and for the sake of brevity and clearness treat the analysis as a single entry account.

EXPENDITURE.	RECEIPT.
Items.	The year. 365.
1. Sundays	52
2. Thursdays	52
3. The Saturday half holiday ...	26
4. Xmas week from Dec. 24th to January 1st (inclusive) ...	9
5. Easter	4
6. Ten days' leave which includes 1 Thurs. 1 Sun. & $\frac{1}{2}$ Saturday ...	7
7. Regimental holidays to commemo- rate special days or to hold sports	4
8. Incidental leave such as sick leave ...	7
9. Days when owing to climatic con- ditions no work can be done. ...	7
10. Fifteen Govt. gazetted holidays from which must be deducted one third to allow for these days coinciding with above items ...	10
11. Days available for training ...	187
Total ...	365 365.

One hundred and eighty seven days! But worse is to follow. Fifteen per cent of the men are permitted to take seven and a half month's furlough per annum. Many Regiments break

this into two periods of three and a half months and four months respectively. Thus 30 per cent obtain three and a half months furlough whilst another 20 per cent are allowed two months, what is known as short leave, in all 50 per cent of the Regiment obtain two months and over.

Continuing the calculation and analysis: this means that in a period of two years every man on an average obtains at least thirty days leave per annum. From this must be deducted a certain number of holidays included in these 30 days viz: 4 Sundays, 4 Thursdays, and two whole Saturdays, totalling ten days.

Therefore one can safely deduct 20 more days from the above 187, leaving one with the figure 167.

As a matter of experience ranging over many years I estimate the number of days available for imparting instruction to a *healthy* man as not more than 150.

Exception may be taken to item 10 on the ground that Hindus and Mahomedans are dealt with together.

Excluding a few class Regiments from our category, it is a recognised fact that if any large proportion of men receive a holiday all training ceases, since the class not entitled to the holiday has to find all the duties, and no one remains to be trained.

Even in the case of recruits the use of the term six or nine months training is apt to be misleading unless the above account is kept in view.

It is an understood thing that until he has been passed into the ranks no recruit obtains any leave except on very urgent private affairs.

Turn to the account and see how little the exclusion of that factor increases the number of days available for instruction.

It has recently been vividly brought home to the writer, when compiling training programmes for a Depot, that the actual hours available in which to convert a gauche Indian village lad into a trained soldier are all too short.

Six months is the official period allowed for an Infantry-

man and nine for a Cavalryman.

With regard to the latter, when it is recollect that these lads have to be taught to ride, groom and generally look after a troop horse with all its appurtenances, know his drill, shoot, scout, do outpost duties, use his sword or lance, or both, fairly efficiently, it is only by combining an intensive system of training with the utmost economy in hours, that ensures "something" resembling a Cavalryman arriving at the front. Indeed I fear some of these *crammed* productions will be a greater source of danger to themselves and their comrades than to the enemy.

At the first sight of these figures one is tempted to murmur " something really must be done".

Fortunately our Indian Army is what we are pleased to designate a long service one, and by the time a man reaches his first pension he really has put in quite an appreciable amount of training. Even allowing that, before the outbreak of the great war, few men stayed on after eight years (certainly in the Infantry), during that period they absorb a great deal of useful military knowledge.

In considering the British service, one can substitute for Government gazetted holidays, Bank ones, and probably a slight increase in the period allowed for Christmas, Easter, and other festive occasions, bringing down the total to very near that computed for in the case of our warriors of Hind.

Well, what about it? Some will say: "You've whittled down one glorious year to 187 or even to 150 days, do you propose introducing a daylight saving bill, or what ? "

I have put forward these significant figures for the edification of those who perhaps have never given the subject much consideration.

Our pre-war manuals speak glibly of training being divided into:—

1. Troop and platoon training (not to mention Section)
2. Squadron and Company training.
3. Regimental training.
4. Brigade training.

5. Divisional training.

6. And one may add, I presume, army exercises.

With all and every one scrambling for a place in the sun the allocation of the periods to each responsible person requires much careful forethought, especially if that portion of the year, known as the leave season, is included in the period ear-marked for training, when, in the mounted arm, every available man is engaged on exercising and grooming horses, giving an occasional flick of a duster to his saddlery, or in the care of all arms, diligently carrying out these various tasks grouped under the somewhat euphemistic word *duties*.

A EUROPEAN ARMY RESERVE FOR INDIA.

BY

C. STEAD ESQ., M.V.O., INDIAN POLICE.

In this note I do not propose to discuss the question of compulsory service for European British subjects in India, but would merely remark in this connection that, without something approaching universal military service—voluntary or compulsory—for the class in question, the scheme I venture to propound would not, in practice, produce any very tangible results.

2. Table XVI at pages 374-6 of Part II, Volume I

Estimated number of European British subjects available for service with the Army Reserve. shows approximately 100,000 male European workers, (about 80 per cent of whom are within the military ages) in India. About 7 per cent

of these being non-British subjects, we are left with 93,000 British workers, 66,000 of whom are shown as belonging to the Army. This leaves us with about 27,000 male Europeans from among whom a reserve might be recruited. Of this number about *4,000 are shown as Government servants—half of whom are gazetted officers, the other half being subordinates—the remaining 23,000 consisting of men employed in commercial and miscellaneous pursuits. It may be safely assumed, I think, that, in an emergency, a reduction of the European element in the civil services and business establishments in this country by one third could be carried out without risk of serious disorganization. As far as the government services are concerned the necessary reduction could at once be effected by the stoppage of leave and the abolition, for the time being, of appointments connected with what may be termed the luxuries of administration. Similarly, if the business world were to confine its activities to the provision of the necessities of life, a considerable number of European employes would be set free.

*This is decidedly an under estimate, but I will take the figures as they stand.

In the circumstances it appears perfectly feasible to call upon the European civil community to hold available for military service a reserve of some 9,000 men, and it is with a force of this strength that I will deal.

3. A large number of the men available are able to ride and shoot, are acclimatized and of ~~Characteristics and qualifications of the men available from a military point of view.~~ superior physique. Many of them also have received a military training in the Territorial and other Volunteer Forces. Of those in government service, the general standard of education as far as gazetted officers are concerned, is quite equal to that obtaining in the case of military officers, and the European subordinates belong to the class that furnishes excellent non-commissioned officers to the Army. Similarly the non-official Europeans are practically all picked men—a considerable number come from the British Universities and Public Schools—and the remainder belong to the class which, at home produces the clerk, shopman and superior artisan. It will be seen, therefore, that the European civil community could furnish recruits, the average quality of whom would be very high indeed, and probably could not be equalled elsewhere.

4. It is obvious that the splendid material at our disposal, especially in view of its scarcity, should be utilized only to the best possible advantage. The numbers available are so small, in fact, that it would be possible to allot each recruit, after careful and individual consideration, to that branch of military service for which, in all respects, he is best qualified. The organization of the reserve on the regimental basis is clearly inexpedient, and, except in the case of the largest centres, such as Calcutta, Bombay, Lahore, etc., impracticable. The battalion, for instance, is much too large a unit in a numerically weak force spread over a vast country like India, and although, as I have said, regiments might be raised in large towns, this would seriously interfere with the efficiency of a scheme which, as will be seen, aims at specialization rather

than uniformity. The material is good—too good and too scarce indeed to be used up in forming the rank and file of half a dozen battalions of infantry and two or three light horse corps, none of which could ever approach the standard of efficiency prevailing in the regular Army. This picked body of men might be utilized to the best advantage; I think, by forming it into a training corps for officers, non-commissioned officers, and specialists, which, when occasion called, could

- (i) feed the General Staff,
- (ii) furnish officers and non-commissioned officers to the various Anglo-Indian Volunteer regiments,
- (iii) replace casualties amongst the officers of British regiments, and
- (iv) supplement the specialized military services.

As regards (i) it must be remembered that, in the class of gazetted civil officers, we have a considerable number of men who are experts in administration and organization, and who, with the necessary military training, should prove valuable recruits to the General Staff in times of stress. It is common knowledge that one of the most serious problems in connection with the enormous New Army we have raised since the outbreak of war, has been the provision of an adequate and reasonably efficient staff; and it is obvious that many individuals with no special aptitude for, or previous training in, administration or organization have been called upon to carry out staff duties. We should certainly have been in a much stronger position in this respect if, at the beginning of the war, say, 10% only of our civil officers, and a similar levy from the big European firms in India, had been selected and trained for staff duties at Quetta or some other convenient centre. If not yet good enough for staff work in the field they would at least, by this time, have become well qualified to set free for active service numbers of valuable regular officers who are now chained to office stools in Simla and the various divisional headquarters. There are many Indian

Civil Servants and Police Officers, for instance, who could render useful service in the General Staff and the Adjutant General's Branches, and the European business firms could certainly supply excellent recruits for the Quarter Master General's staff. Groups (ii) and (iii) require little discussion. The efficient officering of our Volunteer Corps is a pressing measure; and of no less importance is the provision on the spot of a reserve of efficient officers to replace the casualties that would occur in British regiments if India became the scene of important war operations. The specialized military services, (iv), would not only be popular with the European civilians in this country, but would also receive valuable additions to their strength from this community. In government service, the Public Works Department, Railways and Telegraphs could, for instance, provide field engineering companies, bridging trains and signalling sections; the employees of engineering firms would probably make useful gunners and could fill appointments in the Ordnance Department; and in the different trades we should find many men with special service qualifications, such as chemists, motor mechanics, saddlers, caterers, etc. There would still remain, however, a considerable number of those whose civil occupations do not endow them with any particular qualifications of military importance. These men might specialize, as far as possible, in machine gunnery.

After providing for the needs of the European military establishments, it might also be possible for the reserve to supply officers to the Indian Army Reserve; but this appears to be doubtful. It seems, therefore, advisable for the Indian Army Reserve of Officers to look elsewhere for recruits, and, in this connection, the qualifications of the Indian aristocracy and the superior classes of the Anglo-Indian community might well be considered.

5. I do not propose to indulge in any detailed discussion of the system of training that should be adopted—this being a matter with which experts alone are competent to deal—but will confine

myself to a few general remarks on the subject. It seems expedient that recruits should, as far as possible, join the reserve within, say, two years of their first arrival in India, and should then undergo a general military training, if they have not already had a good military training at home, for a period of at least six months. It would doubtless be found convenient to group the recruits into companies at different centres, which might well be selected for their climatic advantages, so as to allow training to go on through the summer months. At the end of this preliminary training it should be possible to distribute the recruits according to their qualifications amongst the 2nd, 3rd and 4th groups of the reserve mentioned in para. 4 above, suitability for the first branch (Staff) being considered at a much later period. The preliminary training and allocation having been completed, the recruits would become fully fledged reservists, and as such should be called up every other year for a biennial training course of a month or six weeks' duration. These courses might easily be arranged so as to cause a minimum of inconvenience to the employers concerned. In the intervals between training the reservists should be attached to the nearest Volunteer corps, and, in this way, might be expected to maintain a reasonable standard of individual efficiency. Those eventually selected for staff employment would of course require special training, which could be given at the Quetta Staff College, and might also, with advantage, be attached to Army Headquarters and to the various Divisional Staffs for periods of duty.

6. It is necessary to point out that, unless liberally financed by Government, a scheme such

Finance. as that outlined by me, would be foredoomed to failure. In the first place it would be necessary to provide an efficient training establishment, as well as suitably equipped buildings for instructional purposes and the accommodation of both instructors and students. If the scheme is to be worked on a voluntary footing, it would also be necessary to arrange for reservists of all ranks to receive

the same pay during training periods as that drawn by them in civil life. As far as government servants are concerned matters could be so arranged that, by avoiding, as far as possible, the appointment of substitutes for officials called up for training, little expense would be incurred in this direction. In the case of non-officials, however, considerable expenditure under this head would be unavoidable. If worked as a compulsory measure it would, of course, be possible to cut down expenditure by restricting reservists to the pay of their military rank, but this would operate very harshly in individual cases, and would probably arouse considerable opposition, even if accompanied by the usual military privileges such as indulgence passages on troopships, reduced railway fares when proceeding on leave, and admission to the various military family pension funds.

CIV

7. It is obvious that to raise a reserve on the lines suggested by me and to bring it up to full strength and efficiency, would probably be a task of some years' duration; but a respectable nucleus, fit for immediate employment with the staff and certain specialized services, could be quickly formed. For this it would only be necessary to hold a military census of the small European civil community, and then, in the light of the information thus obtained, to call up a suitable number of those individuals who, by virtue of previous military training or other special qualifications, could at once render useful military service. It appears, therefore quite possible, even at this stage, for the British civil community in India to assist in the successful prosecution of the present war by furnishing a reasonable addition to the military forces of the Empire.

Formation of a nucleus reserve for immediate service.

NOTES ON THE TURKISH DEFENCES, SINK POSITION.

BY

CAPTAIN P. C. S. HOBART, D. S. O., R. E.

A. ORGANISATION.—Seems to have been very thorough
 1. **General System of Defence.** with a view to holding the long line Sinn Banks-Atab (23,000 yards) with the minimum number of troops, and insured:—

- (a) The smallest number of troops in front line.
- (b) Minimum exposure to loss from artillery fire etc.
- (c) Maximum facility for re-inforcing any threatened point.
- (d) Greatest comfort to troops.
- (e) Ease and convenience of supply by water or road to Magasis.
- (f) Most scope for training of troops and their employment on works required, as the majority were available and concentrated well behind the trench line.
- (g) Use of very little land transport.
- (h) Avoidance of water supply troubles on the line distant from the river.

Full advantage was taken of the extraordinary containing power of even the smallest numbers of modern rifles; especially when combined with an invisible trench.

The plan adopted therefore seems to have been to hold the line with small picquets at long intervals, with a nucleus of perhaps two companies at Sinn Aftar and rather more at Dujailah, which was the only portion where, owing to questions of space and supply, a surprise attack was possible.

Plan 1 giving the elements of the situation will explain this.

The bulk of the troops were kept concentrated in the area bounded by Magasis Canal-Dujailah Depression-Nasafieh Canal. These three channels give excellent natural pro-

Turkish Defences.

tection for men and animals which was improved by the Turks. The canals are 20 to 25 feet wide and give 10 feet of cover.

From this area they could be moved rapidly to any required point either by prepared roads, or by the excellent system of deep communication trenches (from 2000 to 4000 yards long) indicated on plan attached. (*Plan 2*).

It will be noticed that the majority of these lead to the fine Sinn Aftar-Dujailah where our attack must have been considered most probable.

B. ARRANGEMENT.—In depth, there is only one series of works. The fire trenches of the second series, about a mile in rear of the first, being only half complete though many well dug gun positions exist.

The front series apart from the Aftar and Dujailah Redoubts consists of from 2 to 7 lines of trenches on a depth of 150 to 500 yards.

There is the beginning of a third series in the neighbourhood of Magasis.

It may be noted that on the morning of 8th March when our first attack on this system developed, there were about 3500 rifles in the whole front system from the Tigris at Sinn Banks to S. W. of Dujailah. About 6000 were in reserve concentrated at Magasis.

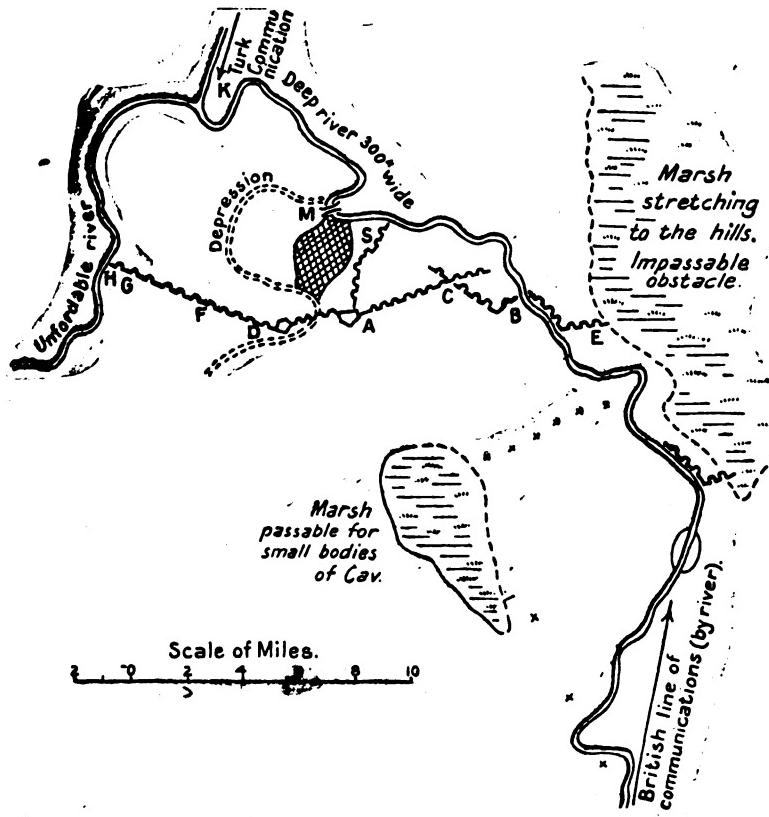


Diagram 1.

SHOWING THE ELEMENTS OF THE SITUATION.

The problem of the Turks being to keep unmolested the bend in the River at K.

Country is all quite flat, treeless, bare and waterless except when inundated by river.

The most conspicuous natural features are the very prominent series of mounds at S, A, and D, about 30 ft. high, and one depression which is about 200 yards wide, about 6 to 12 ft. below level of surrounding country and full of thorn scrub.

Original Line taken up by Turks S, A, D, F and H up till mid-March. Line eventually held E, B, C, A, D, F and G.

Shaded area at M was where Reserve was kept.

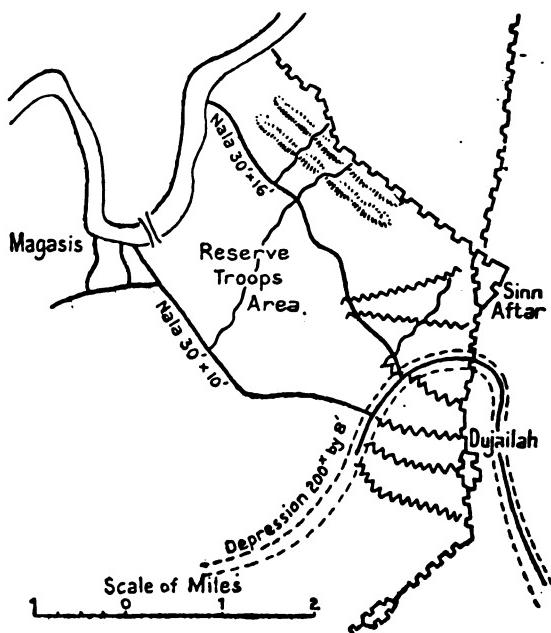
Turkish Defences.

Diagram 2.
SHOWING COVERED COMMUNICATIONS.

Communication Trenches and improved water channels from Reserve Area to Firing Line.

To make diagram clearer only front line of fire trenches is shown.

These were constructed at leisure, by daylight, and not under fire. They embody therefore presumably those points which the Turks have deliberately decided on as desirable when possible.

2. Fire Trenches. The outstanding features are:—

- A. Inconspicuousness.
- B. Trace, ensuring flanking and cross-fire on all ground ahead.
- C. Design: ensuring ample cover against artillery and enfilade.
- D. Provision of alternative positions for guns, and for infantry when conspicuous points had to be held for any reason.

The inference being their realization of the difficulties of artillery observation in a table-flat country, especially as complicated by mirage, and the ineffectiveness of unobserved bombardment of large general areas.

A. INCONSPICUOUSNESS.—Is most remarkable. Trenches are usually invisible at 200 yards. Achieved by:—

- (i) Low command (6").
- (ii) Siting.
- (iii) Provision of dummy line or proximity of an obvious natural line.

There is usually little or no parapet.

Seldom more than 6".

Except in the case of the big natural features (Sinn Banks etc.) which required special treatment (*vide* para. C below), any small rise in the ground or natural bank of water cut is carefully avoided.

Dummy trenches and snipers' posts are often made hereon, to draw our fire: but the real trench is at least 100 yards away: often in rear. This is specially noticeable in the later trenches.

It is necessary to bear in mind the nature of the ground. Its absolute flatness, broken only by the small banks of Arab irrigation cuts 6" to 12" in height. The complete absence of trees, and the non-existence of any vegetation on the 'putt' except an occasional stretch of 2' high camel thorn and euphorbia. The Turks sometimes sited trenches in the middle of these patches and without any clearance of field of fire. These were invisible at 30 yards: and even escaped observation from aeroplanes on some occasions.

The absence of any artificial obstacle along most of the line, though probably due to lack of material, certainly assisted invisibility of works.

The field of fire is often limited to 100-250 yards and even this may be interrupted by bushes, small mounds, etc. But these were of little consequence as cross and flanking fire was always arranged for by the trace.

The Turk sacrifices when necessary field of fire to conceal-

ment, and trusts in the containing power of modern rifles even when no obstacle can be arranged.

This confidence has been fully justified by results.

B. TRACE.—Very little of the fire from Turk trenches is normal to the *general* alignment of those trenches. It is recognised that at times of stress men will usually fire directly only at right angles to the front of that particular bay of the trench in which they happen to be. To obtain cross-fire various devices were employed. The general alignment was not straight, but waved as shown in big sweeps of about 1200 yards.

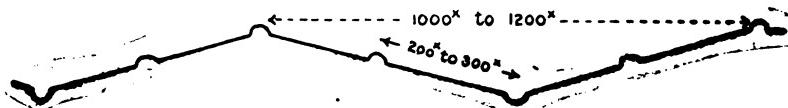


Fig. 3.

In addition, at intervals of 200 to 300 yds., a few traverses were broken forward from the general line. It is quite impossible to spot these points from the front, but they formed in effect a bastion giving flanking fire as shown in diagram below (Fig. 4.)



Fig. 4.

C. DESIGN.

1. Plan

(a) Old plan similar to ours. The old trenches are of pattern shown in Fig. 5.

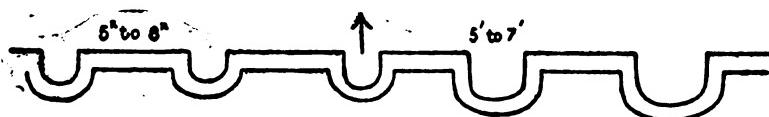


Fig. 5.

(b) An intermediate (unsatisfactory experimental?) design found in a few places where the traverse is almost as wide as the day, but the back of the traverse is curved.

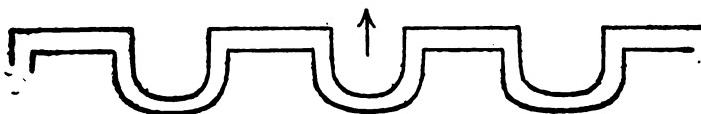


Fig. 6.

Flanking fire was further ensured by various devices such as oblique loopholes where conditions were favourable, and accurate registration by artillery and machine guns of distant depressions or *nallas* on to which enfilade or oblique fire could be brought to bear.

(c) New "key" plan. Along the whole length of position from Sinn Banks to Dujailah, a new front line has been dug recently, of pattern shown in Fig. 6.

This (i) reduces available rifles per yard;

(ii) makes movement along line difficult;

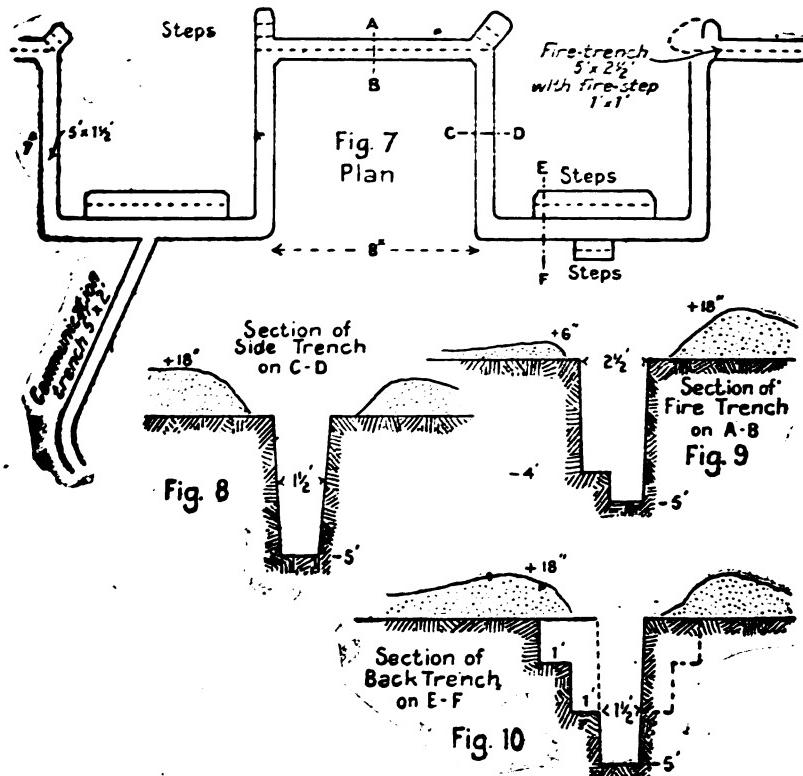
but (iii) gives better protection from artillery fire;

(iv) is difficult to bomb along, and

(v) facilitates counter-attack.

Turkish Defences.**M. G. Emplacement about every tenth bay.**

Plan Fig. 7.



(i) One disadvantage of this trace is reduction of available rifles to 8 per 15 yards (say 1 per 2 yds). At a pinch possibly 4 more could fire from back of traverse, but they would have to fire quite straight to their fronts, and even then it would not be very safe for flank men of bays in front.

(ii) In none of the more recent trenches would it be possible to use a stretcher on account of narrowness.

It is difficult to move even a S. A. A. box along.

Wounded would presumably have been evacuated overland at night.

(iii) The side trenches (shown in Section 11) give perfect cover from enfilade fire together with greatest possible proximity of troops to firing parapet.

This ensures greatest rapidity in lining parapet to repel assault directly the bombardment lifts; and obviates the danger of time required to bring men from bombardment trenches or other shelter, at the moment when attacking troops are actually assaulting the position.

(iv) This plan of trench is difficult to bomb along. It is almost impossible to throw a bomb over two of the big traverses accurately enough to get into the narrow trench beyond; and more cover is given to defenders by the "side" trench. On the other hand "double blocking" would be little use.

If trench be double blocked at B, and C F cut through, enemy has only to cut through H E (which cannot be kept under observation) to reach C under perfect cover. He can then either dig through D A or rush C B, a distance of 6 or 7 yards only.

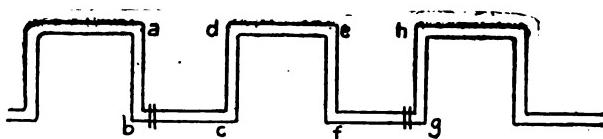
Turkish Defences.

Fig. 11.

Provision of many and easy exits from trenches for counter-attack.

(d) Arrangements at mounds of Sinn Aftar, Dujailah etc., to give tiers of fire.

- (v) In addition to the 6' to 10' width of staircase provided behind each "traverse" (as shown on plan) there were steps at each forward corner of traverse, and steps up to the rear also behind each traverse.
In the 'old' trace footholes are provided every yard.
- (1) Two or even three tiers of fire are arranged, but in every case there are at least two lines of trenches on the *level* plain in front of the mounds, very inconspicuous and both absolutely down in the flat. The second line of these is an alternative line, and in no case could fire be brought to bear from it whilst front line was still occupied by defending troops.
- (2) Except in the case of Dujailah and one or two points in the other mounds, the upper tier of fire is from a trench on top and just in rear of crest of mounds. Owing to natural irregularities of which advantage has been taken, men firing from this are not so conspicuous as might be supposed.

Bombs lobbed over by a man sitting or lying (under complete cover) in this trench would roll down front slope into the support trench.

- (3) At Dujailah there are four possible tiers of fire with very deep and good communication trenches between.

It is possible that on the 8th March the upper (and conspicuous) tiers, on which all our artillery fire was directed, were not manned at all.

- (4) Dujailah is the only place, moreover, where there is an efficient obstacle—in the shape of high wire entanglement two bays deep.

The argument for invisibility did not hold here as the mound was so conspicuous. For the same reason Sinn Aftar and the Sinn Banks might have been expected to be wired had material been available.

- (2) (a) Distance from Front to Support Line about 30-100 yards.
- (a) In the majority of cases this was well out of the ordinary bombing range.

- (b) From support to Reserve Line 200 to 300 yards.
- (b) In the third line trenches were made to fire both ways and had elbow-rests on both sides.

- (3) Absence of latrines, dug-outs etc.
- As lines had never yet had to be occupied continuously or fully, probably latrines had been left till last. Dug-outs probably con-

the same pay during training periods as that drawn by them in civil life. As far as government servants are concerned matters could be so arranged that, by avoiding, as far as possible, the appointment of substitutes for officials called up for training, little expense would be incurred in this direction. In the case of non-officials, however, considerable expenditure under this head would be unavoidable. If worked as a compulsory measure it would, of course, be possible to cut down expenditure by restricting reservists to the pay of their military rank, but this would operate very harshly in individual cases, and would probably arouse considerable opposition, even if accompanied by the usual military privileges such as indulgence passages on troopships, reduced railway fares when proceeding on leave, and admission to the various military family pension funds.

CIV

7. It is obvious that to raise a reserve on the lines suggested by me and to bring it up to full strength and efficiency, would probably be a task of some years' duration; but a respectable nucleus, fit for immediate employment with the staff and certain specialized services, could be quickly formed. For this it would only be necessary to hold a military census of the small European civil community, and then, in the light of the information thus obtained, to call up a suitable number of those individuals who, by virtue of previous military training or other special qualifications, could at once render useful military service. It appears, therefore quite possible, even at this stage, for the British civil community in India to assist in the successful prosecution of the present war by furnishing a reasonable addition to the military forces of the Empire.

Formation of a nucleus reserve for immediate service.

NOTES ON THE TURKISH DEFENCES, SINN POSITION.

BY

CAPTAIN P. C. S. HOBART, D. S. O., R. E.

A. ORGANISATION.—Seems to have been very thorough
1. General System of with a view to holding the long line Sinn Defence. Banks-Atab (23,000 yards) with the minimum number of troops, and insured:—

- (a) The smallest number of troops in front line.
- (b) Minimum exposure to loss from artillery fire etc.
- (c) Maximum facility for re-inforcing any threatened point.
- (d) Greatest comfort to troops.
- (e) Ease and convenience of supply by water or road to Magasis.
- (f) Most scope for training of troops and their employment on works required, as the majority were available and concentrated well behind the trench line.
- (g) Use of very little land transport.
- (h) Avoidance of water supply troubles on the line distant from the river.

Full advantage was taken of the extraordinary containing power of even the smallest numbers of modern rifles; especially when combined with an invisible trench.

The plan adopted therefore seems to have been to hold the line with small picquets at long intervals, with a nucleus of perhaps two companies at Sinn Aftar and rather more at Dujailah, which was the only portion where, owing to questions of space and supply, a surprise attack was possible.

Plan 1 giving the elements of the situation will explain this.

The bulk of the troops were kept concentrated in the area bounded by Magasis Canal-Dujailah Depression-Nasafieh Canal. These three channels give excellent natural pro-

Turkish Defences.

tection for men and animals which was improved by the Turks. The canals are 20 to 25 feet wide and give 10 feet of cover.

From this area they could be moved rapidly to any required point either by prepared roads, or by the excellent system of deep communication trenches (from 2000 to 4000 yards long) indicated on plan attached. (*Plan 2*).

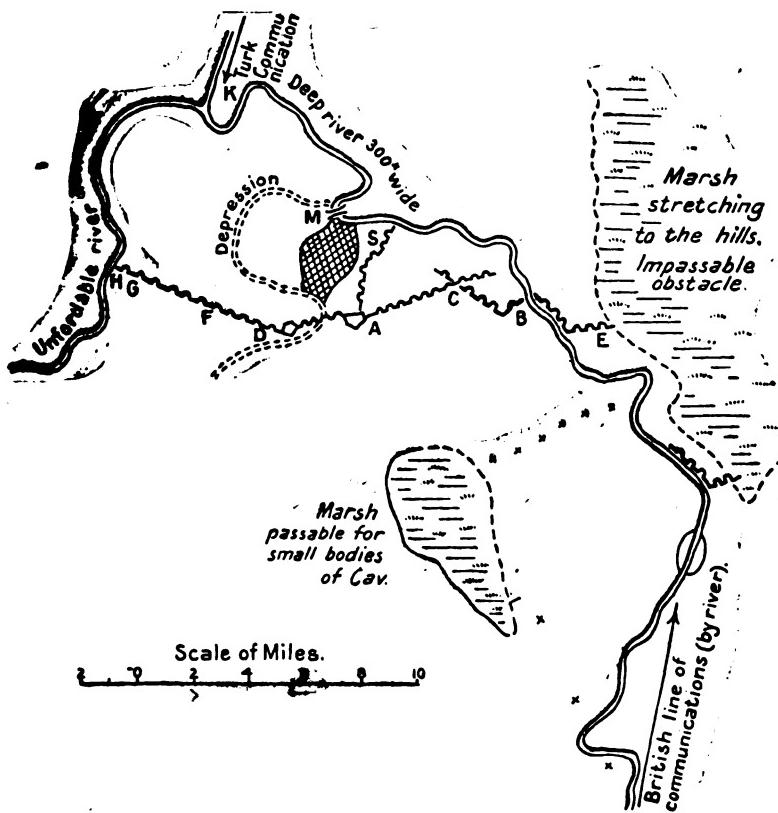
It will be noticed that the majority of these lead to the fine Sinn Aftar-Dujailah where our attack must have been considered most probable.

B. ARRANGEMENT.—In depth, there is only one series of works. The fire trenches of the second series, about a mile in rear of the first, being only half complete though many well dug gun positions exist.

The front series apart from the Aftar and Dujailah Redoubts consists of from 2 to 7 lines of trenches on a depth of 150 to 500 yards.

There is the beginning of a third series in the neighbourhood of Magasis.

It may be noted that on the morning of 8th March when our first attack on this system developed, there were about 3500 rifles in the whole front system from the Tigris at Sinn Banks to S. W. of Dujailah. About 6000 were in reserve concentrated at Magasis.

**Diagram 1.****SHOWING THE ELEMENTS OF THE SITUATION.**

The problem of the Turks being to keep unmolested the bend in the River at K.

Country is all quite flat, treeless, bare and waterless except when inundated by river.

The most conspicuous natural features are the very prominent series of mounds at S, A, and D, about 30 ft. high, and one depression which is about 200 yards wide, about 6 to 12 ft. below level of surrounding country and full of thorn scrub.

Original Line taken up by Turks S, A, D, F and H up till mid-March. Line eventually held E, B, C, A, D, F and G.

Shaded area at M was where Reserve was kept.

Turkish Defences.

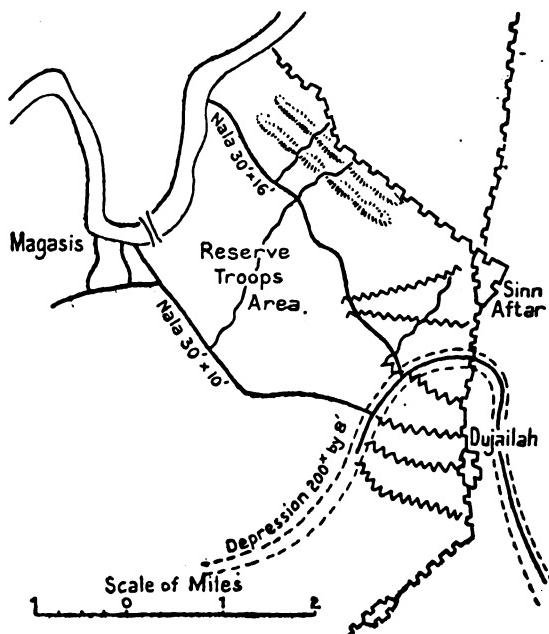


Diagram 2.
SHOWING COVERED COMMUNICATIONS.

Communication Trenches and improved water channels from Reserve Area to Firing Line.

To make diagram clearer only front line of fire trenches is shown.

These were constructed at leisure, by daylight, and not under fire. They embody therefore presumably those points which the Turks have deliberately decided on as desirable when possible.

2. Fire Trenches. The outstanding features are:—

- A. Inconspicuousness.
- B. Trace, ensuring flanking and cross-fire on all ground ahead.
- C. Design: ensuring ample cover against artillery and enfilade.
- D. Provision of alternative positions for guns, and for infantry when conspicuous points had to be held for any reason.

The inference being their realization of the difficulties of artillery observation in a table-flat country, especially as complicated by mirage, and the ineffectiveness of unobserved bombardment of large general areas.

A. INCONSPICUOUSNESS.—Is most remarkable. Trenches are usually invisible at 200 yards. Achieved by:—

- (i) Low command (6").
- (ii) Siting.
- (iii) Provision of dummy line or proximity of an obvious natural line.

There is usually little or no parapet.

Seldom more than 6".

Except in the case of the big natural features (Sinn Banks etc.) which required special treatment (*vide* para. C below), any small rise in the ground or natural bank of water cut is carefully avoided.

Dummy trenches and snipers' posts are often made hereon, to draw our fire: but the real trench is at least 100 yards away: often in rear. This is specially noticeable in the later trenches.

It is necessary to bear in mind the nature of the ground. Its absolute flatness, broken only by the small banks of Arab irrigation cuts 6" to 12" in height. The complete absence of trees, and the non-existence of any vegetation on the 'putt' except an occasional stretch of 2' high camel thorn and euphorbia. The Turks sometimes sited trenches in the middle of these patches and without any clearance of field of fire. These were invisible at 30 yards: and even escaped observation from aeroplanes on some occasions.

The absence of any artificial obstacle along most of the line, though probably due to lack of material, certainly assisted invisibility of works.

The field of fire is often limited to 100-250 yards and even this may be interrupted by bushes, small mounds, etc. But these were of little consequence as cross and flanking fire was always arranged for by the trace.

The Turk sacrifices when necessary field of fire to conceal-

Turkish Defences.

ment, and trusts in the containing power of modern rifles even when no obstacle can be arranged.

This confidence has been fully justified by results.

B. TRACE.—Very little of the fire from Turk trenches is normal to the *general* alignment of those trenches. It is recognised that at times of stress men will usually fire directly only at right angles to the front of that particular bay of the trench in which they happen to be. To obtain cross-fire various devices were employed. The general alignment was not straight, but waved as shown in big sweeps of about 1200 yards.

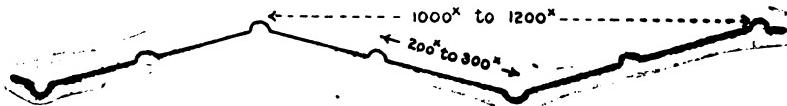


Fig. 3.

In addition, at intervals of 200 to 300 yds., a few traverses were broken forward from the general line. It is quite impossible to spot these points from the front, but they formed in effect a bastion giving flanking fire as shown in diagram below (Fig. 4.)



Fig. 4.

C. DESIGN.

1. Plan

(a) Old plan similar to ours. The old trenches are of pattern shown in Fig. 5.

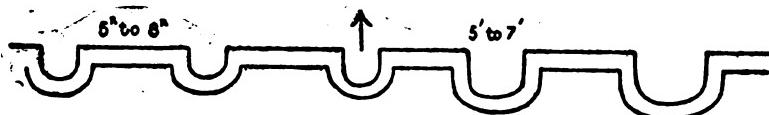


Fig 5.

(b) An intermediate (unsatisfactory experimental?) design found in a few places where the traverse is almost as wide as the day, but the back of the traverse is curved.

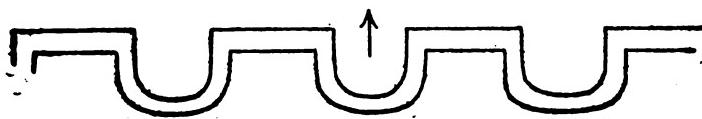


Fig. 6.

Flanking fire was further ensured by various devices such as oblique loopholes where conditions were favourable, and accurate registration by artillery and machine guns of distant depressions or *nallas* on to which enfilade or oblique fire could be brought to bear.

(c) New "key" plan. Along the whole length of position from Sinn Banks to Dujailah, a new front line has been dug recently, of pattern shown in Fig. 6.

This (i) reduces available rifles per yard;

(ii) makes movement along line difficult;

but (iii) gives better protection from artillery fire;

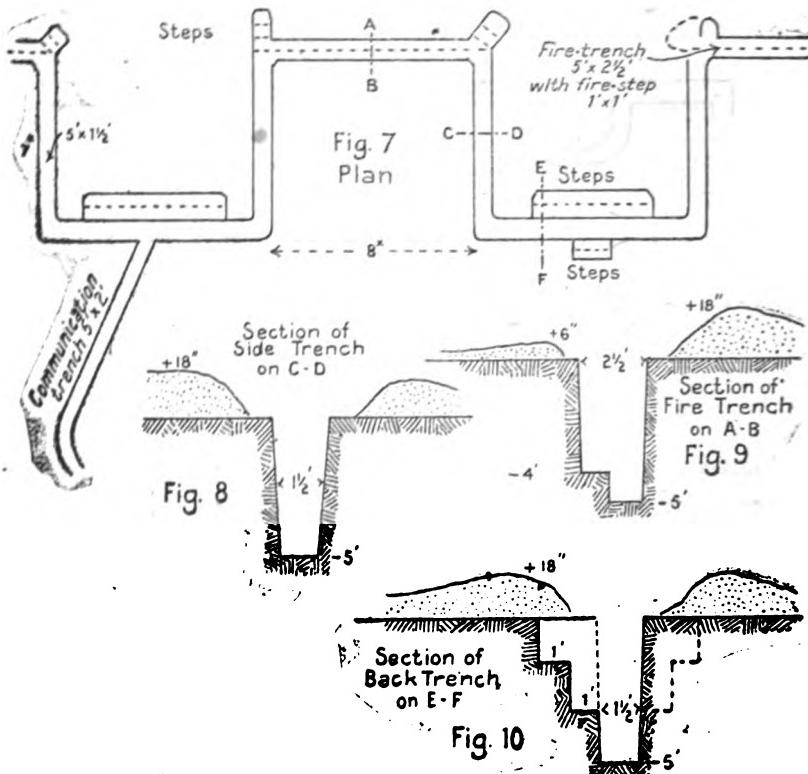
(iv) is difficult to bomb along, and

(v) facilitates counter-attack.

Turkish Defences.

M. G. Emplacement about every tenth bay.

Plan Fig. 7.



(i) One disadvantage of this trace is reduction of available rifles to 8 per 15 yards (say 1 per 2 yds). At a pinch possibly 4 more could fire from back of traverse, but they would have to fire quite straight to their fronts, and even then it would not be very safe for flank men of bays in front.

(ii) In none of the more recent trenches would it be possible to use a stretcher on account of narrowness.

It is difficult to move even a S. A. A. box along.

Wounded would presumably have been evacuated overland at night.

(iii) The side trenches (shown in Section 11) give perfect cover from enfilade fire together with greatest possible proximity of troops to firing parapet.

This ensures greatest rapidity in lining parapet to repel assault directly the bombardment lifts; and obviates the danger of time required to bring men from bombardment trenches or other shelter, at the moment when attacking troops are actually assaulting the position.

(iv) This plan of trench is difficult to bomb along. It is almost impossible to throw a bomb over two of the big traverses accurately enough to get into the narrow trench beyond; and more cover is given to defenders by the "side" trench. On the other hand "double blocking" would be little use.

If trench be double blocked at B, and C F cut through, enemy has only to cut through H E (which cannot be kept under observation) to reach C under perfect cover. He can then either dig through D A or rush C B, a distance of 6 or 7 yards only.

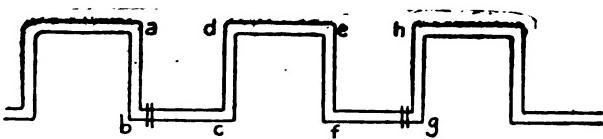
Turkish Defences.

Fig. 11.

Provision of many and easy exits from trenches for counter-attack.

(d) Arrangements at mounds of Sinn Aftar, Dujailah etc., to give tiers of fire.

(v) In addition to the 6' to 10' width of staircase provided behind each "traverse" (as shown on plan) there were steps at each forward corner of traverse, and steps up to the rear also behind each traverse.
In the 'old' trace footholes are provided every yard.

- (1) Two or even three tiers of fire are arranged, but in every case there are at least two lines of trenches on the *level* plain in front of the mounds, very inconspicuous and both absolutely down in the flat. The second line of these is an alternative line, and in no case could fire be brought to bear from it whilst front line was still occupied by defending troops.
- (2) Except in the case of Dujailah and one or two points in the other mounds, the upper tier of fire is from a trench on top and just in rear of crest of mounds. Owing to natural irregularities of which advantage has been taken, men firing from this are not so conspicuous as might be supposed.

Bombs lobbed over by a man sitting or lying (under complete cover) in this trench would roll down front slope into the support trench.

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- (b) From support to Reserve Line 200 to 300 yards.

- (3) Absence of latrines, dug-outs etc.

- (a) In the majority of cases this was well out of the ordinary bombing range.

- (b) In the third line trenches were made to fire both ways and had elbow-rests on both sides.

As lines had never yet had to be occupied continuously or fully, probably latrines had been left till last. Dug-outs probably con-

Turkish Defences.

sidered unnecessary for men in these trenches. Dug-out places for officers' tents are fairly frequent behind support line.

Sinn Aftar and Dujailah which were permanently occupied, are exceptions to this. Here there were dug-outs, carefully built ovens for baking bread, latrines etc, and the sanitation was good. Wells had also been dug, and at one time water was brought to latter in a channel from the river.

(4) Machine Guns.

- (a) Many more emplacements in new trenches than in old. Sited at corner of bay to fire through an arc of about 60 degrees to a flank.
- (b) Near Magasis Fort, which forms a sort of keep about $2\frac{1}{2}$ miles behind main positions, there is a row of machine gun emplacements about 200 yards apart in the open plain which are invisible from even a short distance. They are invariably sited some distance in front of a water-cut bank (which thus gives a background) and are quite flush with the ground, all earth hav-

ing been removed. Plan as under:—

Fig. 13
Section on A-B

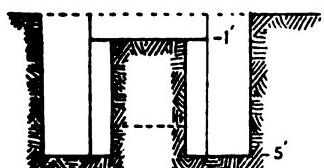


Fig. 12
Plan.

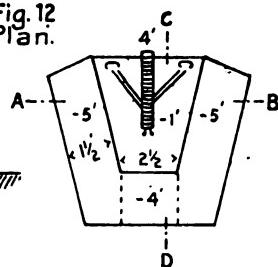
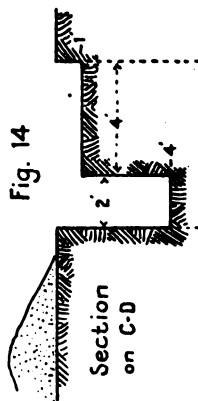


Fig. 14



(3) Communication Trenches.

Of two types:—

- (A) Between front and support lines every 200 yards.

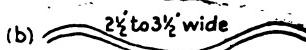
Fig. 15.



Over 5' deep (*i.e.* giving more than 6' of cover).

- (B) From support line back to rear.

Fig. 16.



4' deep (*i.e.* 4 1/2' total cover) with elbow rests on both sides.

Length of these trenches is very remarkable. They run back from the support line, in several cases for over a mile, to the deep cover of Nasafieh Caual, where presumably main reserves were kept. These could thus re-inforce any point necessary.

They were deep, roomy, and well dug.

(4) *Dug out. Cover for animals close behind Support line.*

Is provided, but this seems to be usually close to batteries (see below) and may be for their animals only.

5. ARTILLERY.—The most noticeable points are:—

(i) extremely "forward" positions of guns. Often within 300—400 yards of front infantry line.

(i) All along eastern row of mounds of Sinn Aftar, elevated positions have been prepared, carefully revetted with burnt brick, and having a good ramp leading up to them. These positions are within 250 yards of front line trenches.

(ii) generous provision of alternative emplacements and battery positions.

Between the two rows of mounds are many alternative sets of 4 emplacements, well dug and linked by supervision trenches etc. And many more sets facing in various directions have been constructed in the belt of ground from 100 yards to 1 mile immediately west of the main Sinn position, but, mostly close to it, i.e. well forward.

(iii) provision of double set of emplacements at right angles to one another in positions where a big switch might be advantageous.

(iv) Careful and deep digging, and provision of good supervision trenches. Deep dug-outs for ammunition, personnel and often teams also in comparatively close proximity.

(v) Communication trenches from battery positions to main communication or other trenches leading to O. Ps.

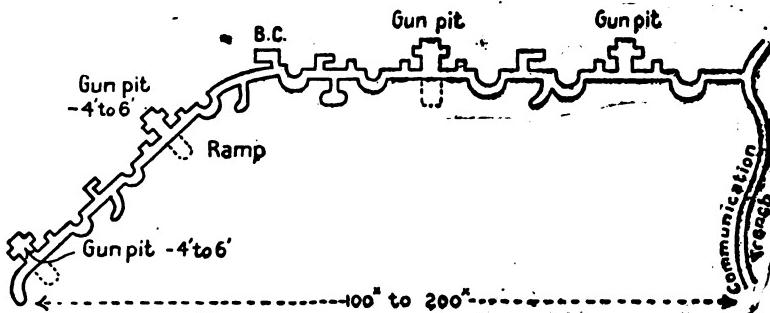
In addition to the many artificial mounds with dug-outs, steel plates etc. in various places, there are also on Dujailah, Sinn Aftar and Sinn Bauks examples of excellent O. P's. with overhead cover, very inconspicuous, and with deep covered ways back and down to officers' dug-outs (roofed), telephone rooms, etc. excavated in rear face of mound.

(vi) Large number of O.P.'s. (mounds etc.) and protection of same by steel plates, overhead cover, etc.

(vii) Provision of dummy guns carefully dug in and in some cases provided with dummy detachments.

General Plan of Battery Position.

Fig 17.



MOHMAND SHOWS.

BY

CAPTAIN A. A. H. BEAMAN, D. S. O., 1st LANCERS.

These jottings by a regimental officer, who has had the luck to be present throughout all the Mohmand operations last year, may be of interest to some who are unfamiliar with that particular kind of warfare, and may even be of use to other young officers who perhaps sooner or later will find themselves fighting over that self same ground.

The writer has not been to the Staff College, nor has he any inside knowledge beyond that imparted by the 1912 'Mohmand Blue Book. These notes are therefore simply the essence of camp talk, villagers' yarns and the writer's own observations. Their accuracy then is probably by no means exact; certain persons attain a prominence out of all proportion to their actual status; and as regards the tactical observations, they are merely the ideas of the regimental officer, with regard to his own small unit, and his own sentiments, rather than to the wider movements and role of the whole force.

Lastly, as these notes are addressed to officers younger than myself, I shall occasionally presume to give advice.

Generally speaking the Mohmands are a prosperous people, living in a fertile land, well watered by a plentiful rainfall and by a system of storage tanks and Persian wheels.

T People. Parts of their country are of singular beauty, and the climate, varying with the altitudes and seasons, is temperate and invigorating. Agriculture is the main means of subsistence.

Each year quantities of surplus grain are exported to Peshawar. It follows therefore that fighting and raiding with them is a pastime, the joy of letting off their rifles, perhaps in the former case discreetly tempered with fanaticism, and not, as with many other tribes the result of poverty and privation.

The Mohmands can muster about 20,000 fighting men, well armed and well supplied with ammunition.

The Martini is still their favourite weapon and fetches a higher price than a Lee Enfield or Mauser, since its life is longer and its ammunition more easily procurable; and from it they shoot a peculiarly pernicious "bumb-goli" or explosive bullet, which goes off with a loud report on percussion, making a horrible mess of anything it hits, and enabling them to range instantly on any ground.

The greater part of this fighting strength comes from the two powerful clans who dwell outside the nebulously demarcated line of British influence, the Bazai and the Khwzai, the sternest warriors of all the Mohmand race, (except perhaps their one time cousin-vassals, the valiant Mullagori, who have long been staunch friends of the British). The Mohmands are of pure Afghan descent, undiluted by any Hindu or Kafir blood.

They are haughty and aristocratic, more polished and less fanatical than the Afridis, and most unexpectedly honest in their dealings with each other.

When on the warpath, the majority of fighting men wear a uniform of khaki Pathan trousers, slate grey shirt and skull cap. The remainder wear white, a colour encouraged by the Millas, and very confusing to us in the preliminary phase, since one cannot distinguish the enemy when so clad from the villagers, until a bullet sings past one's head. In appearance they are much the same as the Afridis of Tirah, and they generally affect close cropped heads, and long love-locks for the convenience of the archangel Gabriel to lift them heavenwards when the last trump shall sound.

The Blue Book of 1912 says that their fighting qualities do not stand very high. But I think anyone who has recently seen them following up our retreats, and unconcernedly picking up empty cartridge cases in the face of heavy shell fire, or anyone who saw them quietly crouching to receive the furious charge of our cavalry, will agree that this is doing them a grave injustice. They frequently display great gallantry in carrying off their wounded whom they scarcely ever abandon to us.

On October the 8th, during our advance, a wounded man was lying on the slope of a small hill, and would soon have been in our hands, when an old grey beard came leaping over the crest and down the slope, picked up his helpless comrade, slung him over his shoulder and began staggering off with him. A terrific fusilade broke out, and before he had covered half the perilous space, the dust was spurting all around him like hailstones on a pond, till it seemed miraculous that anything could live for an instant on the lead-splashed slope. Then the whistles sounded, fire ceased, and the brave old man was allowed to carry off his burden in safety. We learnt afterwards it was his own son for whom he had so freely risked his life.

No expedition can be undertaken without the benediction of some great Mulla. He must declare the **Method of Fighting.** war a holy one, he must accompany the army himself, aiding its progress by his prayers; and most important of all, he must bless the bodies of those who have fallen for their faith, thus ensuring their speedy admittance to the delights of Paradise. Suppose then a Mulla declares *Jihad*—he summons his brother Mullas to circulate the proclamation, and these in turn call upon the Maliks of the congregations to collect their clans and march them to the place of assembly by a certain date. The Maliks rarely dare disobey the summons, since the penalty would be destruction of their homes and property. So each Malik gathers his following which consists of his fighting men, of about an equal number of youngsters, not yet possessing rifles and armed only with the knife, who perform the duties of transport and bearer corps, and sometimes also of a certain number of nursing sisters.

This force then, carrying about 10 days' rations, marches to the *rendezvous* under its own standard—once there the Malik has no further control, each man fights according to his own inclinations and his own instincts, advancing or retiring as he himself thinks best. After a general engagement, the lashkar disperses to its villages to bury its dead and the process of mobilization will have to be gone right through again

from the beginning before it can be brought back for a second battle.

Now the people of whom we heard most out there were the following:—Mahasal of the Barzai. A brigand, an outlaw, wanted by the Sirkar for innumerable dacoities and incursions into our territory. Has fought in every show against us since 1897, is now nearly 60 years old, but is still of magnificent physique, and very popular among the Mohmands. He is perhaps the only leader to whose will they at all conform in battle. A brilliant soldier and in many ways a sportsman, everyone rather likes Mahasal; and most of us heard with a sort of regret the rumour that he had been killed on October 8th. However it was false, but he has left us for a time, having suddenly been summoned home to the bedside of the Lady Mahasal who is seriously indisposed.

He has a young firebrand of a son who is striving hard to follow in father's footsteps, and who is reputed to have threatened John Bradshaw with a revolver while the latter was hesitating to throw in his lot with the Babra in October. It was Mahasal who directed the turning movement of our left flank on September 5th, a movement which might have been successful had he not detached a considerable force to lay up for his inveterate enemies, the Khyber Rifles, who have a way of mysteriously appearing on his right flank at the sound of the first gun and harassing him grievously. But this time they were not at Michni, and so the detached force remained idle throughout the day.

It was altogether a bad day for Mahasal, as he lost his greatest friend, the Chief of his Staff, who used to plan all the enterprises which he himself so boldly executed. This man, whose name I forget, was socially Mahasal's superior, and had great influence among the people. He was killed by Captain Anderson, 21st Lancers, near the bank of the Michni canal.

As previously stated expeditions against us are usually

Mohmand Shows.

instigated by the Mallas, but occasionally the process is reversed; that is to say, the people, or a section of the people, having accumulated a lot of ammunition, become restless and pine to let off their rifles. A complaisant Mulla must then be found to countenance the proceeding.

And thus in April there sprang to sudden prominence the Mulla of Chaknawar.

The story of the villagers is that a rival Malik of Mahasal accused him of taking bribes from the Sirkár. Mahasal to vindicate his honour, was forced to lead a lashkar against us. For fear of the Amir's displeasure however, none of the leading Mullas could be induced to proclaim the undertaking a *Jihad*, and it seemed as if the project would fail, when the hitherto unknown Chakuawar rose to the occasion and so attained a rapid celebrity. He is an old man, bent and dry as a stick, so it is unlikely that he will ever gain any great hold over the people beyond his own diocese. He took no part in the affair of September 5th, but was present with his lashkar on October 8th.

The sudden notoriety of Chaknawar raised the ire and jealousy of another Mulla, the second most influential man among the Mohmands, namely Shankar Gul of Chaharmung, better known as the Babra Mulla. To maintain his own reputation and to stem the rising tide of Chaknawar's popularity, he had no other course open than to fight a battle too. He bade his people wait till the summer crop was garnered, and afterwards brought to Hafiz Kor the largest lashkar by which we have ever been opposed. On the morning of September 5th, he proclaimed that he would that evening say his "Maghrib" or sunset prayer in Shabkadr Fort.

Within very narrow limits the Babra appears to be a sincere man of saintly character. On no conceivable pretext would he receive a Kafir, nor is any so called believer who has shaved the beard, admitted to his presence. But like all his kind he is extremely jealous of his temporal power and reputation. He fought against us in 1897, 1908, and was again

present with a smaller following last year on October 8th.

Lastly, we have the greatest of all the Mohmand Chieftains, the Sufi Sahib, by name Mir Jan Badshah, familiarly known as John Bradshaw. He is a hereditary Chief of Afghan Mohmandstan, formally installed by the Amir, and in receipt of a large allowance from Kabul. Last autumn he played a half-hearted and pitiful part. He was as it were between the devil and the deep sea. If he fought against us, he incurred the wrath of the Amir and forfeiture of his allowance. If he held aloof, he incurred the approbrium of his people and supersession in influence by the Babra. He was not present in September, and throughout the October operations he vacillated and attempted feebly to compromise with us. After the battle on October 8th he went straight home. He is said to be about 40 years old, loud and blustering, fairly enlightened, but of no great decision of character. A constabulary sowar, whose horse was shot, recently fell into his hands and he let him go with no other ill-treatment than some round abuse. There is just one other name of pathetic memory, Atbari.

This prosperous and benevolent gentleman provided the October lashkar with 7 days' flour out of his own pocket, and then took a comfortable seat on Green S. Hill to watch the others fighting. On the arrival of the first high explosive shell he vanished skywards in spray.

Very early in the morning, and invariably on a Sunday or a Thursday, after a latish night before, **The Preliminary Phase.** the orders go round for the Movable Column to march on Shabkadr. The long hot August day is passed in loading and preparation, and in the "cool" of the evening, a solid column of dust begins to move along the road.

This first march is the most trying part of the expedition. Men and animals are soft from the months of heat and fever, and the former already wearied by the labours of the day. I have no advice except to keep off your water bottle as much

as possible, and to see that your personal equipment hangs from the shoulders, and on no account across the chest; but the latter is probably a matter of regimental custom in which you have no say.

The mornings and evenings of the first few days will be spent in digging. No enemy are in the vicinity, depressing stories get about that they have no intention of coming, and the inevitable croaker points out with many maledictions on the Political Department, that at that time of the year no one but an utter fool ever supposed they would. He then explains with irrefutable logic how that, owing to water, domestic, and other difficulties, they could not come even if they wanted to, and sadly you are almost convinced. But the actions of these people are not governed by western rules of logic. They will come all right, or else you would not be out there eating the State out of house and home, nevertheless those days are a bit wearisome; a perpetual cloud of dust envelopes the camp, you cannot see across the mess table for flies, and every hour from Headquarters, comes a fresh list, of precautions to prevent the ingress of cholera which is raging in those villages just over the way. As soon as evening falls, the gun carriages roll out, bearing the victims of heat stroke to the little grove beyond, and presently the volleys rap out, sending the expectant vultures wheeling skyward.

These are the days, the days before the enemy have appeared, and when their arrival appears doubtful, which test the real qualities of a soldier. You are feeling perfectly damnable of course, but so is everyone else, so the less you talk about it the better. Above all things keep the men cheery and to do this you must keep cheery yourself. But how, when the temperature in your tent is about two thousand? Well, it has a great deal to do with your food. With the changing seasons you regulate the diet of your horses and your dogs but not to any extent your own. Now you are in a position where you must not only at all costs keep fit, but where you must be able to make a great and long sustained effort at demand. To this end I would gently suggest

first of all, absolutely to chuck all alcohol (for the time being). The almost insuperable difficulty of this drastic measure may be overcome by the promise and prospect of a glorious "blind" when the show is over.

Again in the heat, you do not want to go eating great chunks of sheep, or of "beeves on the hoof" as the Supply and Transport call the homely oxen out there. Lots of fruit, vegetables, fish, eggs, and bird will keep you fit and cheery and as for drink you cannot beat milk and soda. The advantages of this nauseating beverage are many. It is permanently refreshing, it is easily procurable, and it is so unpleasant that you won't drink more than you want, and so will not fall a victim to the curse of prickly heat. Of course the other fellows will rag at you at first, but soon they will take to it too, and then there won't be any livers and quarrelling in the early morning. When the men are not busy digging, keep them occupied with games, touch-wood and rounders are both simple and popular; and inter-company football, a hundred a side is an excellent game, far superior in excitement and incident to the old fashioned "tramp of the twenty-two men".

The importance of keeping all ranks amused was fully appreciated by the Commander of our Brigade, and owing greatly to his example and precept, long faces were rare indeed at Subban Khwar.

One morning, firing is heard in the foothills and presently a cavalry patrol returns, one of its number roughly bandaged with a lungi and soaked in blood. Instantly new life and interest thrills through the whole camp in anticipation of the coming scrap, and you even begin to forget that all your friends are in France while you are left behind in India.

Now for a few words about the perennial battle ground. I

The Country. attach no map, partly because I am too

lazy to draw one and partly because no scale of less than a foot to the mile is adequate to convey any practical idea of the intricacies of that bewildering country. Not till after several seasons' hunting, does one really get the comparatively simple Peshawar Vale by heart, so you may

imagine that it is only by going over it day after day, and over and over and over again that you may hope to master the terrain around Hafiz Kor; and each visit will reveal some fresh feature of importance. Now the road from Shankargarh (Shabkadr Fort) to Michni forms as it were, our line of deployment. The constabulary from Matta, and troops from Abazai, if not busy in the Alikandi will probably chip in on the enemy's left flank but we may regard Shankargarh as our right, which will usually be occupied by a Brigade. Then two miles down the Michni road we come to Subhan Khwar the subterranean dwelling of the first Brigade ; (the Subhan Khwar river bed, on the bank of which lies the camp, runs down straight from Hafiz Kor, the centre of the enemy's position, a distance of about three miles) and from there another six miles on to Michni. Now let us look at the country from the Subhan Khwar Police Post Tower, our centre, towards Hafiz Kor, their centre. Straight ahead for about a mile and a half is an open plain; then this plain rises suddenly into a long smooth line of dune, grimly grey and sparsely set with shrubs and boulders which we call the "Downs" and which extends for about four miles from Panj Pao on the right to within 1200 yards of the Michui canal on the left. The Subhan Khwar accurately bisects it with a wide deep gap, called the "Ford"; and beyond the left end a succession of spurs run down towards the canal bank, (the furthest spur appearing almost to lose itself in the canal.) Beyond the "Downs," and seemingly rising out of them, are a few jagged eminences of a darker colour and more rocky nature; beyond these, on the right of the Ford as you look, are the ruins of Shahbaz Kor; straight ahead the ruins of Hafiz Kor dominated by a solitary tapering peak rising steep and sheer, called Green S. Hill, and again on the left a higher three peaked ridge of razor-like sharpness called Black D. ridge. All this looks quite simple. But when you climb the "Downs" the illusion of their innocence is at once dispelled. You immediately find yourself in a perfect labyrinth of nullas and knolls; and as you go forward you are

always commanded by other eminences to your front and flanks. At length, having reached the further end of the "Downs" you see on the left of the Ford, what looks like a plain extending $\frac{3}{4}$ mile to a further ridge, Tower Ridge, and again beyond that, a perfectly open expanse, right up to Green S. Hill. "By gad," you say "what a magnificent chance for cavalry"! and you may even return to camp with that idea firmly fixed in your head. But the cavalry patrols, who have been sorely perplexed by invisible marksmen, have quite a different story to tell. Both those plateaux are intersected by the most insidious nullas, flush with the ground, about six feet wide and eight feet deep, and quite impassable except at few and distant crossings. Until one is within a few yards of them they are absolutely invisible. Now these nullas, so harassing to us, are the enemy's greatest asset.

Had he made for himself a system of communicating trenches, he could not have improved on what nature has already done for him. By means of them a whole lashkar can pass from Hafiz Kor into the Subhan Kliwar or into Shahbaz Kor and up on to the centre and right of the "Downs" or by the "10 r" nulla and on to the left of the "Downs" and the banks of the Michni canal, not only without a single man being seen, but in perfect safety. For in these deep, narrow ways, he is as safe against all arms as are the markers in the butts of a rifle range. Once you have grasped the lie of these nullas, you will no longer marvel how it is that the enemy are occupying the hill from which you retired only a few minutes before, when you believed that none were within a mile of you. On mobilization you are presented with a map, 1 inch to the mile, within its scope a wonderfully accurate little piece of work, but you must enlarge that particular area by many times, elaborating the indistinct features, and adding those that are omitted, by the observation of your own and other reliable eyes. You might as well try to open the Bank of England's safe with a watch key, as try to learn that country by such

a miniature delineation.

For two or three days before the battle, shots will be exchanged between the enemy's advanced operations. Let us then look at this phase from the point of view of a cavalry officer. First of all, let him put altogether out of his mind those principles of civilised warfare which he has so laboriously mastered through many and many a training season, and let him start with an open mind, adaptable to the special circumstances and directed by common sense. Two facts about this invisible enemy, who moves from place to place with such mysterious rapidity, must be remembered. Most of us have been brought up to believe that "Tribesmen fly at the sight of Cavalry". They do. But whether they fly at or from the cavalry, circumstances alone decide. The second belief is that "all tribesmen are splendid shots". Individually this is entirely untrue. Any Frontier Militia Adjutant will tell you that when they join, though they fancy their shooting inordinately they cannot hit a haystack at over 30 yards; and indeed their crude home-made ammunition, is not conducive to Bisley marksmanship.

It may be laid down as a maxim then that, at 50 yards and over, they will miss the object at which they are aiming. This was fully exemplified on the 5th September; in the cavalry charges most of the shooting was at point blank range, presumably aimed at the riders, and yet the hits on horses inmeasurably exceeded those on men. If, therefore, carrying an order, a message, or other unhappy circumstances, compel you to cross a wide, open space, quite close to the enemy, and you are painfully conscious of his undivided attention, let this thought console you that if you are hit you will be extraordinarily unlucky. So much for his individual fire. But his collective fire is quite another thing—whether he can read the figures on his sights, whether he knows that these figures represent certain ranges, and whether he is capable of judging distances by hundreds of yards, and if he is, whether his ammunition conforms to his rifle's sighting, is all a matter of doubt. But one fact is very clear; that he picks up ranges with marvellous

rapidity—which is the essence of collective fire. With his hawk-like vision, he watches for the dust spot of his shot, or the burst of his infernal “bumb goli” and the next bullet comes in among you. In this connection, a certain bad habit of ours might be mentioned. If you manoeuvres you expose yourself unnecessarily, you will instantly attract the blasphemous attentions of your seniors. But on these shows, officers seem to make a point of displaying their full height on the sky-line, and one hardly dares lie down as one has been taught, for fear of incurring the suspicion of cowardice. This is rather a cheap form of bravado, you wouldn’t do it in France, and it is moreover cruel to your men. You won’t be hit yourself, but a group of officers on the sky line, makes an excellent aiming mark, and your men are bound to suffer. In one of the engagements, an officer was wearing an old and faithful topi which many summer suns had bleached to a widely conspicuous lightness. The wearer went untouched, but most of the day’s casualties took place around that treacherous tile.

A cavalry patrol is not allowed to fight; its duty is solely to reconnoitre the enemy. It is therefore a very helpless thing, at the mercy of any party of the enemy, who are bold enough to ambush it, and when fired upon, able only to retire.

Throughout the whole operations, there is no more arduous duty than that of the patrols during the days while the tribesmen are gathering—and especially anxious is the position of flank parties or scouts. These men, in pairs, separated from the main body of their patrols, know well that at any moment, from any of the innumerable nullas into which they cannot see until they reach the edge, the enemy may spring suddenly upon them. It is only the deeply instilled principle that every one from the Colonel to the youngest trumpeter is ready to risk his life rather than let him fall into the hands of the enemy, which will inspire a man to perform this duty with boldness and confidence. But it is most undesirable that patrols should become so involved. A dead or wounded man is incredibly heavy and

awkward to handle. No single cavalryman can support and carry off a dead body on his horse unaided. The following suggestions may then be of use if you happen to be commanding a squadron and are responsible for the reconnaissance of your brigade. Don't send out small patrols at all. Take your whole squadron. This larger body is of course, also liable to ambuscade in the hills and nullas, but its imposing appearance, sweeping resolutely forward in two extended lines, will impel the enemy to fire at very long ranges and so you will get your information. Also if you have a man or a horse hit you can get him and the equipment away without difficulty. Later, as the enemy's force gathers, you will be fired on all along the "Downs". And you can only turn about and trot away. This is bad for the men, and engenders in the enemy a contempt for cavalry. As soon as the enemy is known to have arrived in force, at the risk of being thought a funk, ask leave to stop reconnoitring. Otherwise you will only lose horses, and perhaps men, to prove what you already know.

The system of strong reconnoitring patrols as opposed to the ordinary patrols is employed by the Guides and other experienced Frontier Corps. This year, there has been no instance of such a party coming to grief, beyond an occasional man or horse wounded; but a patrol of a weak troop was on one occasion ambushed at about a hundred yards by a gang of fifty Mohmands, and had a miraculous escape with no greater loss than the officer's hat; and that at a time when no enemy were believed to be in the immediate vicinity. So never send weak patrols and always expect to meet the enemy. • Scouts not to be far out.

During these few days there will not be much for the other arms to do. But they will be interesting days nevertheless. Each morning through your glasses you can see from the tower, the gathering clans moving about Hafiz Kor, under their standards. On Green S. Hill at about 8 a.m., a solitary commanding figure in white, addressed for the space

of about an hour, a large seated congregation—who he was and what he said, I could never find out. Perhaps it was Mahasal lecturing his brigadiers and their staffs, perhaps it was the Babra himself exhorting the faithful to martyrdom. But the Mohmand constable of the tower and the friendlies were convinced that it was neither of these illustrious persons. At about 9 a.m. they came down from the further heights, vanished and reappeared on the "Downs".

Here they remained till about 3 p.m., building sangars, and firing ranging shots. Then leaving a sentry on each prominence they departed. At about 5 p.m., they turned out again to have a pot shot at our patrols, and at any convoy which might be passing along the road. Before sunset you saw them praying all along the "Downs," and, their devotions finished, they might or might not come down into the plain and follow up the withdrawing latrine picket. Then darkness falls, and presently a great blaze lights up the sky above Hafiz Kor. It is their cooking fire. Now the old frontier regiments take care to dine simultaneously with the enemy, for "heavy sniping" is expected at about 9 o'clock. If you have not been sniped before, you are probably longing for the experience—but actually, though by no means dangerous, it is most unpleasant. There is a sudden fusilade into the camp. Bullets are noisy things, especially the high flyers, and the air hums and hisses like a hornet's nest. Every man in the camp is convinced that every bullet has missed him by the narrow margin of an inch. Then there is a pause in the firing, and one of the snipers shouts abuse at the camp, from about 40 yards off "Come out you dirty skunks, come out of your holes in the earth and fight like men!"

He then condemns the apostates who are in the pay of the Kafir, and concludes with a painful and libellous description of our pedigrees. Then silence again, till the enemy's bugler, an ex-soldier of course, sounds "there's no parade to day," or "Officers come and be damned" and again from another quarter, the angry bullets come shrieking past, till you think there won't be a live horse or mule in camp. But

daylight reveals scarcely a casualty. You see they don't understand the trajectory. If they shot from say 1500 instead of 50 yards off, the camp would be a most unhealthy place. One evening a sniper fired, from right out in the plain, three shots at the pickets; two of his bullets fell into the cavalry lines and the third killed a mule. But happily they put no faith in the theory of musketry, which we are at such pains to teach them while they are in our service.

Eventually, the total strength of enemy having arrived, it is decided to attack. As our force moves out, you will see big groups of them standing in the sangars on the "Downs"; and far away behind, the distant crests will be thickly lined with on-lookers and the general reserve. The guns open fire over the heads of the advancing infantry. Instantly the groups in the sangars disappear from sight and you say, "what a pity, they've been scared away"—but they have not—they are there all right, sheltering behind precipitous bluffs, in perfect security from shell fire. As soon as the infantry begins to mount the "Downs," they will return unseen to the sangars and give it a warm reception. From this time until the final stage of the retirement, the infantry will see very little but occasional heads and puffs of smoke—but sometimes a solitary fanatic will leap up ahead frantically gesticulating and hurling abuse, or a standard bearer may expose himself, with contemptuous disregard as on the 5th of September when such an one, mounted on a white pony, placing himself on a conspicuous summit, remained there posed like an equestrian marble, while four maxims and innumerable rifles played upon him—at last he fell, but as the dust raised by this storm of bullets slowly cleared, he was seen walking calmly away from his fallen pony with the standard still held aloft. Or perhaps there may be a sudden or unexpected rush of a few *ghazis*, who appear as it were from nowhere, and usually account for some of our people before they are killed. But during the action, the infantry will scarcely see anything to fire at, except the "Shabash wallas" on the distant ridges behind, and those are far out of rifle range. But the perpetual hum over your head

speaks of their presence though unseen—and when a unit has to cross an open space such as to Tower Ridge, from those nullas which I have tried to describe, there comes a torrent of lead. The most advanced point having been reached, you lie for some hours, looking through your glasses for your quarry, and wondering between whiles how the long wide battle is going, in which you seem to have so small a part. Away on the right, a violent outburst of fire denotes some movement, but what, you cannot tell, and probably will not know for several days or weeks—on the left, a great cloud of dust tells you the cavalry have charged, and with a thrill, you wonder how they fared. And all the time the shells go shrieking over your head, breaking into delicate puffs of fleecy smoke, or bursting on impact with dull and angry roars according to their nature. The accuracy with which they are directed appears almost uncanny. As soon as a knot of the enemy appears on one of the distant ridges, a torrent of shells falls upon it. As soon as you are being called from some almost invisible position, there too, falls the leaden rain—and during your advance and retirement every perilous recess is scourged with their searching fire. And yet somehow the enemy don't seem to mind them—a group is located in a nulla, in an instant every kind of shell bursts as it seems, right among them. The explosive howitzers tear the earth and shatter everything around, and it seems as if nothing in the area could live for an instant. The enemy's fire stops, the guns turn off on to some other target—and a few moments later up come the enemy's heads again, and their fire begins anew. The Mohmands declare that they can dodge shrapnel and indeed this would appear to be true. During the retirement on September 5th, they came swinging down to the Michni canal in long extended lines over an open space. Each time a gun fired they saw the smoke, they heard the shell, and they fell flat. All the ground where they lay was torn and rent and boiled with dust. Then up they got and advanced till the next gun fired, when they repeated the manoeuvre, apparently without losses. During the retirement on October 8th, shrapnel burst right among a group who were picking up empty

cases on "whaleback"; all bolted for cover except one, who was knocked head over heels and then lay still. "That blighter's copped it" we said, but two minutes later he got up, staggered about a bit, then picked up his rifle and went on looking for empty cartridge cases.

Going over the battle afterwards in one's mind, various things strike one. Firstly the immense advantage the enemy has over us in the terrain and in his formations. We have to advance and to retire in wide formations, across open ground, which gives him a splendid mark. He has to conform to no concerted movements, he passes freely and safely from one point to another by the communicating nullas, and when opportunity occurs, he puts only his head over the edge and fires. Since most of these nullas pass through plains, it seems to me we should use them in the same way as the enemy uses them. With our bayonets and our magazine rifles we should have him at a disadvantage; and we could reach Hafiz Kor as safely and as invisibly as he reaches the "Downs." It is a frontier maxim "Never get into a nulla." But these are different. They are communication trenches through open plains, treat them as such and take bombs and gas if you like, and if the enemy gets out of them, then you have him at the same disadvantage that he usually has you, that is to say you'd have his whole body to shoot at while only exposing your head. And thus a battalion or more could be passed to Green S. Hill in perfect safety—it would then be in rear of the enemy, on his communications, and the results should be great. This however won't concern you—but there is another thing worth remembering. If your men are Hindus, and the body of a *ghazi* or other enemy falls into your hands—don't let them cut off the head. Such an act will strike deep horror into all the Pathans in the Brigade. Perhaps you will say that if these same Pathans happened to be on leave and one of your men fell into their hands, he would meet with a more terrible fate—and you can never forget the ghastly thing that was your friend, which you helped to bring in in a blauket. Quite true, but while these Pathans

are with us, there is no more staunch comrade in the world, so it is worth respecting their feelings in so small a matter. Besides, its not a very dignified thing to go hacking about a brave man when he is dead—especially a *ghazi*, who should merit your respect since he has made the supreme sacrifice for his faith.

Another question is often discussed. "Why are our retirements so rapid"? "Why dont we lay up for them?" Well if you try this game in the hills, the odds are you won't come back to tell the tale. The agility and endurance of these people on their own hills is super-human, and they would be all around you in no time. Every one agrees to this; but why not do it on the plain just below the "Downs"? Again Piffers will tell you there is nothing to be gained—suppose your Regiment waits just near the Michni canal, apparently an excellent position for the purpose. A few minutes after you have left the "Downs," a head will appear on the sky line and vanish again; now and then another head or two is seen and a few shots sing over your heads. That is all—he doesn't come out, and there's nothing to fire at. Then at last the first unit of the battalion begins to retire. It gives a big mark, out there in the open—and instantly a hot fire bursts upon it—from the invisible enemy—each unit in turn is subjected to the ordeal—and the last of all to go will have a particularly unpleasant time, since all the enemy in the neighbourhood will attend to it. In some mysterious way fire will come also from the flanks, and it will be hampered by the burden of dead and wounded.

On October 8th, Sapper Gray scored a great hit with his booby traps. These were ammunition boxes, filled with guncotton, ingenuously abandoned. At the opening of one, no less than seven men vanished completely, and worse still their rifles with them—which was particularly trying to their heirs. A box or two left behind like this, but filled with dynamite cartridges, might soon destroy half the rifles in the Mohmand country.

Well here endeth these jottings. Having read them you may think this fellow has told us a lot about saving

our own skins but nothing about how to crush the enemy.

The truth is, I don't know. If, as on September 5th, they come out at all, even though only into the crops, the cavalry and guns can do it. But if, as on April 18th and October 8th, they stick to their hills and nullas, they are practically invulnerable. Without going into their country, how to crush the Mohmands? An airship would do it of course, but how else I don't know.

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

(With rank of Officers at the date of the Essay).

- 1872...ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
1873...COLQUHOUN, Capt. J. A. S., R.A.
1874...COLQUHOUN, Capt. J. A. S., R.A.
1879...ST. JOHN, Maj. O. B. C., R.E.
1880...BARROW, Lieut. E. G., 7th Bengal Infantry.
1882...MASON, Lieut. A. H., R.E.
1883...COLLEN, Maj. E. H. H., S.C.
1884...BARROW, Capt. E. G., 7th Bengal Infantry.
1887...YATE, Lieut. A. C., 27th Baluch Infantry.
1888...MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (especially awarded a silver medal).
1889...DUFF, Capt. B., 9th Bengal Infantry.
1890...MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
1891...CARDEW, Lieut. F. G., 10th Bengal Lancers.
1893...BULLOCK, Maj. G. M., Devonshire Regiment.
1894...CARTER, Capt. F. C., Northumberland Fusiliers.
1895...NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
1896...BINGLEY, Capt. A. H., 7th Bengal Infantry.
1897...NAPIER, Capt. G. S. F. Oxfordshire Light Infantry.
1898...MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
1899...NEVILLE, Col. J. P. C., S.C.
1900...THULLIER, Capt. H. F., R.E.
LUPBOCK, Capt. G., R.E., (specially awarded a silver medal).
1901...RANKEN, Lieut.-Col. G. P., 46th Punjab Infantry.
1902...TURNER, Capt. H. H. F., 2nd Bengal Lancers.
1903...HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R.F.G., R.E., (specially awarded a silver medal).
1904...MACMUNN, Maj. G. F., D.S.O., R.F.A.
1905...COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907...WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908...JEUDWINE, Maj. H. S., R.A.
1909...MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (specially awarded a silver medal).
1911...Mr. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
1914...BAINBRIDGE, Lieut.-Col. W.F., D.S.O., 51st Sikhs, (F. F.)
NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
(specially awarded a silver medal).
1915...No award.

a miniature delineation.

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The beginning of the operations. exchanged between the enemy's advanced parties and our cavalry. Let us then look at this phase from the point of view of a cavalry officer. First of all, let him put altogether out of his mind those principles of civilised warfare which he has so laboriously mastered through many and many a training season, and let him start with an open mind, adaptable to the special circumstances and directed by common sense. Two facts about this invisible enemy, who moves from place to place with such mysterious rapidity, must be remembered. Most of us have been brought up to believe that "Tribesmen fly at the sight of Cavalry". They do. But whether they fly at or from the cavalry, circumstances alone decide. The second belief is that "all tribesmen are splendid shots". Individually this is entirely untrue. Any Frontier Militia Adjutant will tell you that when they join, though they fancy their shooting inordinately they cannot hit a haystack at over 30 yards; and indeed their crude home-made ammunition, is not conducive to clever marksmanship.

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rapidity—which is the essence of collective fire. With his hawk-like vision, he watches for the dust spot of his shot, or the burst of his infernal “bumb goli” and the next bullet comes in among you. In this connection, a certain bad habit of ours might be mentioned. If on manoeuvres you expose yourself unnecessarily, you will instantly attract the blasphemous attentions of your seniors. But on these shows, officers seem to make a point of displaying their full height on the sky-line, and one hardly dares lie down as one has been taught, for fear of incurring the suspicion of cowardice. This is rather a cheap form of bravado, you wouldn’t do it in France, and it is moreover cruel to your men. You won’t be hit yourself, but a group of officers on the sky line, makes an excellent aiming mark, and your men are bound to suffer. In one of the engagements, an officer was wearing an old and faithful topi which many sunnier suns had bleached to a widely conspicuous lightness. The wearer went untouched, but most of the day’s casualties took place around that treacherous tile.

A cavalry patrol is not allowed to fight; its duty is solely to reconnoitre the enemy. It is therefore a very helpless thing, at the mercy of any party of the enemy, who are bold enough to ambush it, and when fired upon, able only to retire.

Throughout the whole operations, there is no more arduous duty than that of the patrols during the days while the tribesmen are gathering—and especially anxious is the position of flank parties or scouts. These men, in pairs, separated from the main body of their patrols, know well that at any moment, from any of the innumerable nullas into which they cannot see until they reach the edge, the enemy may spring suddenly upon them. It is only the deeply instilled principle that every one from the Colonel to the youngest trumpeter is ready to risk his life rather than let him fall into the hands of the enemy, which will inspire a man to perform this duty with boldness and confidence. But it is most undesirable that patrols should become so involved. A dead or wounded man is incredibly heavy and

awkward to handle. No single cavalryman can support and carry off a dead body on his horse unassisted. The following suggestions may then be of use if you happen to be commanding a squadron and are responsible for the reconnoissance of your brigade. Don't send out small parties at all. Take your whole squadron. This larger body is of course also liable to ambuscade in the hills and mounds, but its imposing appearance, sweeping rapidly forward in two extended lines, will impel the enemy to fire at very long ranges and so you will get your information. Also if you have a man or a horse hit you can get him and the equipment away without difficulty. Later, is the enemy's force gathered, you will be fired on all along the "Dowrs". And you can only turn about and trot away. This is bad for the men, and engenders in the enemy a contempt for cavalry. As soon as the enemy is known to have arrived in force at the risk of being thought a trap, ask leave to stop reconnoitring. Otherwise you will fly hither and thither, and perhaps menu, to prove what you already know.

The system of strong rearguard parties proposed to the ordinary patrols I employed in my service, after experienced British Corps. has been, however, adopted to instance of such a party coming to grief. A single man or horse were killed, and the patrol driven off. On one occasion a patrol was sent out to reconnoitre a village of half Mohmands, and the party was captured by no greater loss than the horses lost. The reason is that no enemy were detected prior to the capture of the party. So never send weak patrols, and always be on the alert for the enemy. Success goes to the alert.

During the early days of the war, we used to meet each other at us to do battle. They would be mounted on their ponies. Each mounted on the back of another, and so on up to the tower, the king's castle, where they would stand on top of their standards, and shout. So that the men could see a solitary combatant up there, and say, "Look! he is the

of about an hour, a large seated congregation—who he was and what he said, I could never find out. Perhaps it was Mahasal lecturing his brigadiers and their staffs, perhaps it was the Babra himself exhorting the faithful to martyrdom. But the Mohmand constable of the tower and the friendlies were convinced that it was neither of these illustrious persons. At about 9 a.m. they came down from the further heights, vanished and reappeared on the "Downs".

Here they remained till about 3 p.m., building sangars, and firing ranging shots. Then leaving a sentry on each prominence they departed. At about 5 p.m., they turned out again to have a pot shot at our patrols, and at any convoy which might be passing along the road. Before sunset you saw them praying all along the "Downs," and, their devotions finished, they might or might not come down into the plain and follow up the withdrawing latrine picket. Then darkness falls, and presently a great blaze lights up the sky above Hafiz Kor. It is their cooking fire. Now the old frontier regiments take care to dine simultaneously with the enemy, for "heavy sniping" is expected at about 9 o'clock. If you have not been sniped before, you are probably longing for the experience—but actually, though by no means dangerous, it is most unpleasant. There is a sudden fusilade into the camp. Bullets are noisy things, especially the high flyers, and the air hums and hisses like a hornet's nest. Every man in the camp is convinced that every bullet has missed him by the narrow margin of an inch. Then there is a pause in the firing, and one of the snipers shouts abuse at the camp, from about 40 yards off "Come out you dirty skunks, come out of your holes in the earth and fight like men!"

He then condemns the apostates who are in the pay of the Kasir, and concludes with a painful and libellous description of our pedigrees. Then silence again, till the enemy's bugler, an ex-soldier of course, sounds "there's no parade to day," or "Officers come and be damned" and again from another quarter, the angry bullets come shrieking past, till you think there won't be a live horse or mule in camp. But

daylight reveals scarcely a casualty. You see they don't understand the trajectory. If they shot from say 1500 instead of 50 yards off, the camp would be a most unhealthy place. One evening a sniper fired, from right out in the plain, three shots at the pickets; two of his bullets fell into the cavalry lines and the third killed a mule. But happily they put no faith in the theory of musketry, which we are at such pains to teach them while they are in our service.

Eventually, the total strength of enemy having arrived, it is decided to attack. As our force moves out, you will see big groups of them standing in the sangars on the "Downs"; and far away behind, the distant crests will be thickly lined with on-lookers and the general reserve. The guns open fire over the heads of the advancing infantry. Instantly the groups in the sangars disappear from sight and you say, "what a pity, they've been scared away"—but they have not—they are there all right, sheltering behind precipitous bluffs, in perfect security from shell fire. As soon as the infantry begins to mount the "Downs," they will return unseen to the sangars and give it a warm reception. From this time until the final stage of the retirement, the infantry will see very little but occasional heads and puffs of smoke—but sometimes a solitary fanatic will leap up ahead frantically gesticulating and hurling abuse, or a standard bearer may expose himself, with contemptuous disregard as on the 5th of September when such an one, mounted on a white pony, placing himself on a conspicuous summit, remained there posed like an equestrian marble, while four maxims and innumerable rifles played upon him—at last he fell, but as the dust raised by this storm of bullets slowly cleared, he was seen walking calmly away from his fallen pony with the standard still held aloft. Or perhaps there may be a sudden or unexpected rush of a few ghurris, who appear as it were from nowhere, and usually account for some of our people before they are killed. But during the action, the infantry will scarcely see anything to fire at, except the "Shai-sh-wallas" on the distant ridges behind, and those are far out of rifle range. But the perpetual hum over your head

speaks of their presence though unseen—and when a unit has to cross an open space such as to Tower Ridge, from those nullas which I have tried to describe, there comes a torrent of lead. The most advanced point having been reached, you lie for some hours, looking through your glasses for your quarry, and wondering between whiles how the long wide battle is going, in which you seem to have so small a part. Away on the right, a violent outburst of fire denotes some movement, but what, you cannot tell, and probably will not know for several days or weeks—on the left, a great cloud of dust tells you the cavalry have charged, and with a thrill, you wonder how they fared. And all the time the shells go shrieking over your head, breaking into delicate puffs of fleecy smoke, or bursting on impact with dull and angry roars according to their nature. The accuracy with which they are directed appears almost uncanny. As soon as a knot of the enemy appears on one of the distant ridges, a torrent of shells falls upon it. As soon as you are being called from some almost invisible position, there too, falls the leaden rain—and during your advance and retirement every perilous recess is scourged with their searching fire. And yet somehow the enemy don't seem to mind them—a group is located in a nulla, in an instant every kind of shell bursts as it seems, right among them. The explosive howitzers tear the earth and shatter everything around, and it seems as if nothing in the area could live for an instant. The enemy's fire stops, the guns turn off on to some other target—and a few moments later up come the enemy's heads again, and their fire begins anew. The Mohmands declare that they can dodge shrapnel and indeed this would appear to be true. During the retirement on September 5th, they came swinging down to the Michni canal in long extended lines over an open space. Each time a gun fired they saw the smoke, they heard the shell, and they fell flat. All the ground where they lay was torn and rent and boiled with dust. Then up they got and advanced till the next gun fired, when they repeated the manoeuvre, apparently without losses. During the retirement on October 8th, shrapnel burst right among a group who were picking up empty

cases on "whaleback"; all loaded for cover except one, who was knocked head over heels and then lay still. "That lighter's copped it" we said, but two minutes later he got up, staggered about a bit, then picked up his rifle and went on looking for empty cartridge cases.

Going over the battle afterwards in one's mind, various things strike one. Firstly the immense advantage the enemy has over us in the terrain and in his formations. We have to advance and to retire in wide formations, across open ground, which gives him a splendid mark. He has to conform to no concerted movements, he passes freely and safely from one point to another by the communing mullahs, and when opportunity occurs, he puts only his head over the ridge and fires. Since most of these mullahs pass through plains, it seems to me we should use them in the same way as the enemy uses them. With our bayonets and our machine rifles we should have him at a disadvantage; and we could reach Hafiz Kor as safely and as invisibly as he reaches the "Downs." It is a frontier maxim "Never get into a mullah." But these are different. They are communing mullahs through open plains, treat them as such and take him out and gas it you like, and if the enemy goes out of harm's way you have him at the same disadvantage that he usually has - i.e. that is to say you'd have his whole body to shoot at while only exposing your head. And this a bayonet or more could be passed to Green S. Hill in perfect safety - well this be in rear of the enemy, on his communications, and the results should be great. This however won't concern us - there is another thing worth remembering. If your men are Hindus, and the body of a *gurjar* or other communitarian into your hands - don't let the aghorite be held. Such an act will strike deep horror into all the Hindus in the Empire. Perhaps you will say that at these wars Pekris belonged to the *shudras* and one of your own will be killed, but he is bound to meet with a more terrible fate, and you can never forget the ghastly thing that was done to the *shudras* which even helped to bring in in a market. Quite true, but what does Pekris

are with us, there is no more staunch comrade in the world, so it is worth respecting their feelings in so small a matter. Besides, its not a very dignified thing to go hacking about a brave man when he is dead—especially a *ghazi*, who should merit your respect since he has made the supreme sacrifice for his faith.

Another question is often discussed. "Why are our retirements so rapid"? "Why dont we lay up for them?" Well if you try this game in the hills, the odds are you won't come back to tell the tale. The agility and endurance of these people on their own hills is super-human, and they would be all around you in no time. Every one agrees to this; but why not do it on the plain just below the "Downs"? Again Piffers will tell you there is nothing to be gained—suppose your Regiment waits just near the Michni canal, apparently an excellent position for the purpose. A few minutes after you have left the "Downs," a head will appear on the sky line and vanish again; now and then another head or two is seen and a few shots sing over your heads. That is all—he doesn't come out, and there's nothing to fire at. Then at last the first unit of the battalion begins to retire. It gives a big mark, out there in the open—and instantly a hot fire bursts upon it—from the invisible enemy—each unit in turn is subjected to the ordeal—and the last of all to go will have a particularly unpleasant time, since all the enemy in the neighbourhood will attend to it. In some mysterious way fire will come also from the flanks, and it will be hampered by the burden of dead and wounded.

On October 8th, Sapper Gray scored a great hit with his booby traps. These were ammunition boxes, filled with guncotton, ingenuously abandoned. At the opening of one, no less than seven men vanished completely, and worse still their rifles with them—which was particularly trying to their heirs. A box or two left behind like this, but filled with dynamite cartridges, might soon destra half the rifles in the Mohmand country.

Well here endeth these jottings. Having read them you may think this fellow has told us a lot about saving

our own skins but nothing about how to crush the enemy.

The truth is, I don't know. If, as on September 5th, they come out at all, even though only into the crops, the cavalry and guns can do it. But if, as on April 18th and October 8th, they stick to their hills and nullas, they are practically invulnerable. Without going into their country, how to crush the Mohmands? An airship would do it of course, but how else I don't know.

United Service Institution of India.

PRIZE ESSAY GOLD MEDALLISTS.

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ELSMIE, Maj. A. M. S., 56th Rifles, F. F., (especially awarded a silver medal).
1911...Mr. D. PETRIE, M.A., Punjab Police.
1912...CARTER, Major B. C., The King's Regiment.
1913...THOMSON, Major A. G., 58th Vaughan's Rifles (F. F.)
1914...BAINBRIDGE, Lieut.-Col. W.F., D.S.O., 51st Sikhs, (F. F.)
NORMAN, Major C. L. M.V.O., Q. V. O. Corps of Guides
(especially awarded a silver medal).
1915...No award.

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- 1889...**BELL**, Col. M. S., V.C., R.E., (specially awarded a gold medal).
- 1890...**YOUNGHUSBAND**, Capt. F. E. King's Dragoon Guards.
- 1891...**SAWYER**, Major H. A., 45th Sikhs.
 RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892...**VAUGHAN**, Capt. H. B., 7th Bengal Infantry.
 JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893...**BOWER**, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
 FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894...**O'SULLIVAN**, Major G. H. W., R.E.
 MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895...**DAVIES**, Capt. H. R., Oxfordshire Light Infantry.
 GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896...**COCKERILL**, Lieut. G. K., 28th Punjab Infantry.
 GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897...**SWYAYNE**, Capt. E. J. E., 16th Rajput Infantry.
 SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898...**WALKER**, Capt. H. B., Duke of Cornwall's Light Infantry.
 ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899...**DOUGLAS**, Capt. J. A., 2nd Bengal Lancers.
 MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900...**WINGATE**, Capt. A. W. S., 14th Bengal Lancers.
 GURDIT SINGH, Havildar, 45th Sikhs.
- 1901...**BURTON**, Major E. B., 17th Bengal Lancers.
 SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
- 1902...**RAY**, Capt. M. R. E., 7th Rajput Infantry.
 TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903...**MANIFOLD**, Lieut.-Colonel C. C., I.M.S.
 GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904...**FRASER**, Capt. L. D., R.G.A.
 MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

MacGregor Memorial Medallists—contd.

- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHAUDUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.
- 1912...PRITCHARD, Capt. B.E.A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
WARATONG, Havildar, Burma Military Police (specially awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 100th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 100th Hazara Pioneers.
- 1916...ABDUR RAHMAN, Naik, 21st Punjabis
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)
Specially awarded a Silver Medal.



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1893...BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
 FAZALDAD KHAN, Dafadar, 17th Bengal Cavalry.
1894...O'SULLIVAN, Major G. H. W., R.E.
 MULL SINGH, Sowar, 6th Bengal Cavalry.
1895...DAVIES, Capt. H. R., Oxfordshire Light Infantry.
 GANGA DYAL SINGH, Havildar, 2nd Rajputs.
1896...COCKERILL, Lieut. G. K., 28th Punjab Infantry.
 GHULAM NABI, Sepoy, Q. O. Corps of Guides.
1897...SWYAYNE, Capt. E. J. E., 16th Rajput Infantry.
 SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
1898...WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
 ADAM KHAN, Havildar, Q. O. Corps of Guides.
1899...DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
 MIHR DIN, Naik, Bengal Sappers and Miners.
1900...WINGATE, Capt. A. W. S., 14th Bengal Lancers.
 GURDIT SINGH, Havildar, 45th Sikhs.
1901...BURTON, Major E. B., 17th Bengal Lancers.
 SUNDAR SINGH, Colour Havildar, 31st Burma Infantry.
1902...RAY, Capt. M. R. E., 7th Rajput Infantry.
 TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
1903...MANIFOLD, Lieut.-Colonel C. C., I.M.S.
 GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
1904...FRASER, Capt. L. D., R.G.A.
 MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.

MacGregor Memorial Medallists—*contd.*

- 1905...RENNICK, Major F., 40th Pathans, (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906...SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907...NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908...GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjabi Rifles.
- 1909...MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910...SYKES, Major P. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911.. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burma Infantry.
- 1912...PRITCHARD, Capt. B.E.A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913...ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K.G.O.) Central India Horse.
WARATONG, Havildar, Burma Military Police (specially awarded a silver medal).
- 1914...BAILEY, Capt. F. M., I.A. (Political Dept.)
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naick, 106th Hazara Pioneers.
- 1915.. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916...ABDUR RAHMAN, NAIK, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.)
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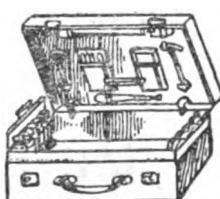
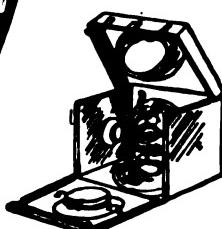
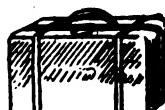
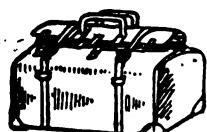
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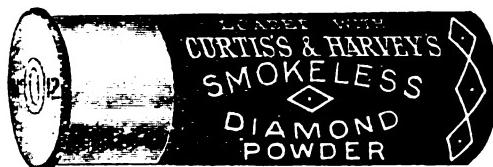
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